



United States  
Department of  
Agriculture



NRCS

Natural  
Resources  
Conservation  
Service

In cooperation with  
United States Department  
of Agriculture, Forest  
Service; United States  
Department of the  
Interior, Bureau of Land  
Management; University  
of Idaho, College of  
Agriculture; and Idaho  
Soil Conservation  
Commission

# Soil Survey of Clearwater Area, Idaho







# How To Use This Soil Survey

## General Soil Map

The **general soil map**, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

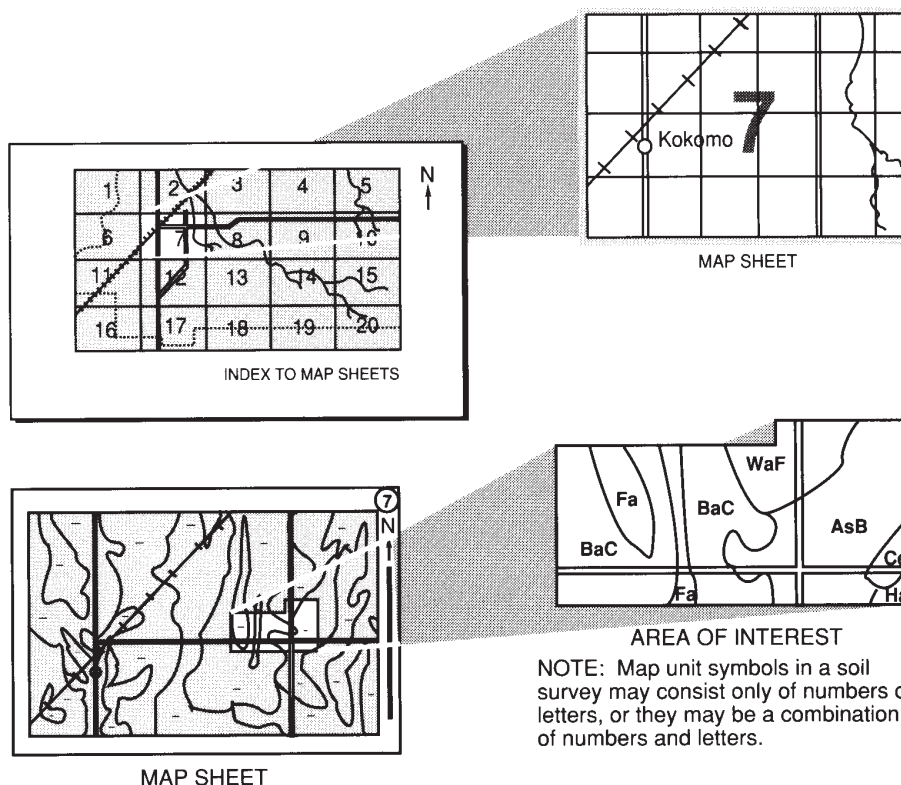
## Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.





## National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the United States Department of Agriculture, Forest Service; United States Department of the Interior, Bureau of Land Management; University of Idaho, College of Agriculture; and Idaho Soil Conservation Commission. The survey is part of the technical assistance furnished to the Clearwater Soil and Water Conservation District.

Major fieldwork for this soil survey was completed in 2000. Soil names and descriptions were approved in 2003. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2003. The most current official data are available on the Internet.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

## Nondiscrimination Statement

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

## Cover Caption

View of Elk Butte, northeast of Elk River, Idaho. Norwidge-Threebear complex, 5 to 25 percent slopes, is on the plateau in left foreground, and Grasshopper ashy loam, 0 to 3 percent slopes, is on the flood plain. Riswold-Grangemont complex, 15 to 35 percent slopes, is on the footslopes, and Dullaxe-Judgetown complex, 35 to 70 percent slopes, is on the mountain backslopes.

*Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at <http://www.nrcs.usda.gov>.*

# Contents

---

<b>Contents</b> .....	iii
<b>Foreword</b> .....	xiii
General Nature of the Survey Area .....	1
Climate .....	2
History and Development .....	3
Agriculture .....	5
Geology .....	6
How This Survey Was Made .....	9
<b>General Soil Map Units</b> .....	11
Soils on Stream Terraces, Drainageways, Flood Plains, and Basins .....	11
1. Teneb-Lewhand-Burntcreek-Hildebrand-Aquandic Endoaquepts .....	11
2. Narnett-Aquandic Cryaquepts-Jury .....	11
Soils on Canyonsides and Benches .....	12
3. Klickson-Agatha-Kettenbach .....	12
4. Texascreek-Johnson-Whiskeycreek-Fordcreek .....	13
Soils Dominantly on Basalt Plateaus .....	14
5. Taney-Carlinton .....	14
6. Grangemont-Kauder-Riswold .....	14
Soils on Mountains .....	14
7. Kruse-Noil-Uvi .....	14
8. Brodeer-Dullaxe-Mushel-Boulder creek .....	14
9. Grandad-Rettig-Township .....	15
10. Vaywood-Berthahill-Hucherit .....	15
11. Water .....	15
<b>Detailed Soil Map Units</b> .....	17
1—Agatha-Rock outcrop complex, 35 to 75 percent slopes .....	18
2—Agatha ashy silt loam, 15 to 40 percent slopes .....	20
3—Agatha ashy silt loam, 40 to 75 percent slopes .....	21
4—Ahsahka-Fordcreek complex, 20 to 40 percent slopes .....	22
5—Ahsahka-Whiskeycreek complex, 35 to 55 percent slopes .....	24
6—Aldermant ashy loam, 35 to 75 percent slopes .....	25
7—Aldermant ashy loam, 35 to 70 percent slopes .....	27
8—Aldermant ashy loam, dry, 35 to 70 percent slopes .....	28
9—Aquandic Cryaquepts, 0 to 5 percent slopes .....	29
10—Aquandic Endoaquepts and Aquandic Dystrudepts soils, 0 to 10 percent slopes .....	30
11—Bandmill-Grangemont-Bargamin complex, 10 to 35 percent slopes .....	32
12—Bandmill-Riswold complex, 5 to 20 percent slopes .....	34
13—Berthahill-Handoff complex, 15 to 35 percent slopes .....	35
14—Berthahill-Handoff complex, 35 to 75 percent slopes .....	37
15—Berthahill-Shattuck complex, 15 to 35 percent slopes .....	39
16—Bigtalk, cool-Bigtalk, wet complex, 35 to 65 percent slopes .....	41
17—Bigtalk loam, 35 to 65 percent slopes .....	42
18—Bigtalk-Floodwood complex, 15 to 35 percent slopes .....	43



## Soil Survey of Clearwater Area, Idaho

19—Bigtalk-Keeler complex, 15 to 35 percent slopes .....	45
20—Boulder creek ashy loam, 15 to 35 percent slopes.....	47
21—Boulder creek ashy silt loam, 35 to 65 percent slopes .....	48
22—Boulder creek ashy silt loam, 35 to 75 percent slopes .....	49
23—Boulder creek, moist-Brodeer complex, 35 to 70 percent slopes .....	50
24—Boulder creek-Brodeer complex, 35 to 70 percent slopes.....	52
25—Boulder creek-Judgetown complex, 35 to 75 percent slopes .....	54
26—Boulder creek-Marble creek association, 35 to 65 percent slopes .....	55
27—Boulder creek-Rettig complex, 45 to 90 percent slopes .....	57
28—Brequito ashy silt loam, 25 to 50 percent slopes .....	59
29—Brequito-Grangemont complex, 20 to 45 percent slopes .....	60
30—Brequito-Lado complex, 15 to 35 percent slopes .....	62
31—Brequito-Lado complex, 5 to 15 percent slopes .....	64
32—Brequito-Mushel complex, 15 to 35 percent slopes.....	65
33—Brequito-Mushel complex, 35 to 75 percent slopes.....	67
34—Brodeer, dry-Brodeer complex, 15 to 35 percent slopes .....	69
35—Brodeer-Mushel complex, 15 to 35 percent slopes .....	71
36—Brodeer, warm-Mushel, dry complex, 15 to 35 percent slopes.....	72
37—Brodeer-Boulder creek complex, 15 to 40 percent slopes.....	74
38—Brodeer-Flewsie complex, 30 to 60 percent slopes.....	76
39—Brodeer-Lostpete complex, 15 to 45 percent slopes .....	78
40—Brodeer-Lostpete complex, moist, 15 to 35 percent slopes .....	79
41—Brodeer, dry-Mushel complex, 35 to 60 percent slopes .....	81
42—Brodeer-Mushel complex, 35 to 75 percent slopes .....	83
43—Burnt creek ashy loam, 0 to 3 percent slopes .....	85
44—Campra gravelly ashy silt loam, 40 to 75 percent slopes .....	86
45—Campra-Sly complex, 10 to 35 percent slopes .....	87
46—Carlinton ashy silt loam, 20 to 30 percent slopes .....	89
47—Carlinton ashy silt loam, 3 to 20 percent slopes .....	90
48—Carlinton-Kruse complex, 5 to 20 percent slopes.....	91
49—Carlinton-Seddow complex, 3 to 15 percent slopes .....	93
50—Casey creek ashy silt loam, 2 to 15 percent slopes .....	94
51—Cavendish silt loam, 2 to 8 percent slopes .....	96
52—Cavendish-Taney complex, 8 to 20 percent slopes .....	97
53—Cobbler-Aldermand complex, 35 to 75 percent slopes.....	98
54—Cobbler-Noil complex, 45 to 75 percent slopes .....	100
55—Cranberry-Riswold complex, 20 to 45 percent slopes .....	102
56—Crumarine silt loam, 0 to 3 percent slopes .....	104
57—Dam .....	105
58—Driscoll silt loam, 3 to 12 percent slopes .....	105
59—Driscoll-Larkin complex, 12 to 25 percent slopes .....	106
60—Dullaxe, high elevation-Dullaxe association, 30 to 60 percent slopes.....	107
61—Dullaxe, dry-Dullaxe, wet complex, 35 to 75 percent slopes .....	109
62—Dullaxe-Brodeer complex, 10 to 40 percent slopes.....	111
63—Dullaxe-Brodeer complex, 40 to 70 percent slopes.....	113
64—Dullaxe-Judgetown complex, 35 to 70 percent slopes .....	114
65—Dullaxe-Judgetown, moist complex, 35 to 55 percent slopes.....	116
66—Dullaxe-Jury complex, 35 to 65 percent slopes .....	118
67—Dumps, wood slash .....	119
68—Dworshak ashy silt loam, 35 to 50 percent slopes .....	119
69—Dworshak-Brequito complex, 15 to 35 percent slopes .....	120
70—Elkberry-Elkberry, wet complex, 15 to 35 percent slopes.....	122
71—Elkberry-Dworshak complex, 15 to 40 percent slopes .....	124
72—Elkridge-Riswold complex, 20 to 40 percent slopes .....	126

# Soil Survey of Clearwater Area, Idaho

73—Elkridge-Riswold complex, 40 to 70 percent slopes .....	127
74—Fico-Hucberit complex, 40 to 70 percent slopes .....	129
75—Fico-Weitas complex, 20 to 40 percent slopes .....	130
76—Flewsie ashy silt loam, 35 to 65 percent slopes .....	132
77—Flewsie, low precipitation-Flewsie, dry complex, 30 to 60 percent slopes .....	133
78—Floodwood ashy silt loam, 35 to 65 percent slopes .....	135
79—Floodwood, warm-Keeler complex, 35 to 65 percent slopes .....	136
80—Floodwood-Keeler complex, 15 to 35 percent slopes .....	138
81—Floodwood-Keeler complex, 35 to 65 percent slopes .....	139
82—Flumecreek ashy loam, 35 to 65 percent slopes .....	141
83—Flumecreek-Stepoff-Dworshak complex, 15 to 35 percent slopes .....	142
84—Fordcreek loam, 40 to 75 percent slopes .....	144
85—Fordcreek loam, 5 to 15 percent slopes .....	146
86—Garveson-Floodwood complex, 35 to 65 percent slopes .....	147
87—Gramil-Lewhand complex, 0 to 2 percent slopes .....	148
88—Gramil-Reggear complex, 2 to 6 percent slopes .....	150
89—Grandad ashy silt loam, 15 to 40 percent slopes .....	151
90—Grandad, dry-Grandad complex, 15 to 40 percent slopes .....	153
91—Grandad, dry-Grandad complex, 40 to 60 percent slopes .....	154
92—Grandad-Rettig complex, 15 to 35 percent slopes .....	156
93—Grandad-Rettig complex, 35 to 65 percent slopes .....	158
94—Grandad-Scand complex, 35 to 65 percent slopes .....	159
95—Grangemont-Kauder complex, 5 to 20 percent slopes .....	161
96—Grangemont-Kauder complex, dry, 5 to 20 percent slopes .....	163
97—Grangemont-Kauder complex, 5 to 30 percent slopes .....	165
98—Grangemont-Riswold complex, 10 to 35 percent slopes .....	166
99—Grasshopper ashy loam, 0 to 3 percent slopes .....	168
100—Gwin-Kettenbach complex, 35 to 75 percent slopes .....	169
101—Gwin-Kettenbach-Keuterville complex, 10 to 25 percent slopes .....	171
102—Hildebrand-Spacecreek complex, 2 to 12 percent slopes .....	173
103—Hubub ashy silt loam, 20 to 40 percent slopes .....	175
104—Hubub-Dworshak complex, 5 to 20 percent slopes .....	176
105—Hubub-Lostpete complex, 10 to 30 percent slopes .....	177
106—Hucberit medial silt loam, 15 to 40 percent slopes .....	179
107—Hucberit-Vaywood complex, 35 to 70 percent slopes .....	180
108—Hugus ashy silt loam, 15 to 35 percent slopes .....	182
109—Hugus ashy silt loam, 35 to 75 percent slopes .....	183
110—Hugus ashy silt loam, moist, 15 to 30 percent slopes .....	184
111—Hugus ashy silt loam, moist, 30 to 65 percent slopes .....	186
112—Hugus, moist-Hugus complex, 35 to 75 percent slopes .....	187
113—Hugus-Dworshak complex, 15 to 35 percent slopes .....	189
114—Itzee sandy loam, 0 to 12 percent slopes .....	191
115—Jacket silt loam, 12 to 30 percent slopes .....	192
116—Jacket silt loam, 3 to 12 percent slopes .....	193
117—Jacket-Wellsbench complex, 20 to 35 percent slopes .....	194
118—Jacot-Garveson complex, 15 to 35 percent slopes .....	195
119—Jacot-Garveson complex, 35 to 65 percent slopes .....	197
120—Jaype-Revling complex, 5 to 40 percent slopes .....	199
121—Jaype-Revling complex, dry, 5 to 40 percent slopes .....	201
122—Jaype-Statemeadow complex, 10 to 45 percent slopes .....	203
123—Joel-Setters complex, 5 to 20 percent slopes .....	205
124—Johnson loam, 45 to 65 percent slopes .....	206
125—Johnson-Swayne complex, 20 to 40 percent slopes .....	207
126—Johnson-Swayne complex, 40 to 75 percent slopes .....	209



## Soil Survey of Clearwater Area, Idaho

127—Johnson-Texas creek complex, 35 to 75 percent slopes.....	211
128—Jury medial silt loam, 10 to 30 percent slopes.....	213
129—Jury medial silt loam, 30 to 65 percent slopes.....	214
130—Jury medial silt loam, cold, 30 to 65 percent slopes.....	215
131—Jury-Weitas complex, 25 to 60 percent slopes.....	216
132—Jury-Weitas complex, 5 to 25 percent slopes.....	217
133—Kauder ashy silt loam, 5 to 20 percent slopes.....	219
134—Keeler, dry-Keeler complex, 35 to 70 percent slopes.....	220
135—Keeler, moist-Keeler complex, 35 to 75 percent slopes.....	222
136—Keeler-Aldermand complex, 35 to 70 percent slopes.....	224
137—Keeler-Jacot complex, 30 to 55 percent slopes.....	226
138—Keeler-Lado complex, 10 to 35 percent slopes.....	227
139—Kettenbach-Gwin-Rock outcrop complex, 45 to 75 percent slopes.....	229
140—Kettenbach-Keuterville association, 35 to 75 percent slopes.....	231
141—Keuterville gravelly silt loam, 10 to 25 percent slopes.....	233
142—Keuterville gravelly silt loam, 25 to 50 percent slopes.....	234
143—Keuterville-Rock outcrop complex, 35 to 90 percent slopes.....	235
144—Klickson ashy silt loam, 15 to 35 percent slopes.....	236
145—Klickson ashy silt loam, 35 to 90 percent slopes.....	237
146—Klickson-Agatha association, 35 to 75 percent slopes.....	238
147—Klickson-Kettenbach association, 35 to 90 percent slopes.....	240
148—Klickson-Rock outcrop-Kettenbach complex, 45 to 90 percent slopes.....	242
149—Konkol-Revling complex, 5 to 40 percent slopes.....	243
150—Kooskia silt loam, 10 to 20 percent slopes.....	245
151—Kooskia silt loam, 3 to 10 percent slopes.....	247
152—Kruse ashy loam, 20 to 35 percent slopes.....	248
153—Kruse ashy loam, 35 to 65 percent slopes.....	249
154—Kruse-Aldermand complex, 20 to 40 percent slopes.....	250
155—Kruse-Aldermand complex, 40 to 65 percent slopes.....	252
156—Kruse-McCrosket complex, 35 to 65 percent slopes.....	254
157—Kruse-Noil complex, 20 to 35 percent slopes.....	255
158—Kruse-Teakean complex, 20 to 45 percent slopes.....	257
159—Larkin-Driscoll complex, 25 to 50 percent slopes.....	259
160—Lebaron-Latahco complex, 0 to 3 percent slopes.....	261
161—Lewhand-Burnt creek complex, 0 to 2 percent slopes.....	262
162—Lewhand-Teneb complex, 0 to 2 percent slopes.....	264
163—Longbar-Bigtalk complex, 15 to 35 percent slopes.....	266
164—Longbar-Bigtalk complex, 35 to 65 percent slopes.....	267
165—Longpen ashy silt loam, 20 to 40 percent slopes.....	269
166—Longpen ashy silt loam, 5 to 20 percent slopes.....	270
167—Meland-Jacket complex, 5 to 20 percent slopes.....	271
168—Meland-Keuterville complex, 10 to 35 percent slopes.....	273
169—Mushel-Brodeer complex, 15 to 35 percent slopes.....	275
170—Mushel-Dullaxe complex, 35 to 70 percent slopes.....	276
171—Nakarna ashy silt loam, 15 to 35 percent slopes.....	278
172—Nakarna ashy silt loam, 35 to 65 percent slopes.....	279
173—Nakarna-Nakarna, warm complex, 35 to 65 percent slopes.....	280
174—Narnett-Jury complex, 15 to 30 percent slopes.....	282
175—Neva ashy silt loam, 35 to 70 percent slopes.....	284
176—Newlig silt loam, 5 to 20 percent slopes.....	285
177—Noil-Keeler complex, 40 to 75 percent slopes.....	286
178—Noil-Boulder creek-Rock outcrop complex, 45 to 85 percent slopes.....	288
179—Norwidge-Threebear complex, moist, 5 to 25 percent slopes.....	290
180—Odonnell-Grandad complex, 10 to 35 percent slopes.....	291

# Soil Survey of Clearwater Area, Idaho

181—Odonnell medial silt loam, 15 to 35 percent slopes .....	293
182—Oxyaquic Xerofluvents-Itzee complex, 0 to 5 percent slopes .....	294
183—Pits, quarry .....	296
184—Placer-Dowper-Grangemont complex, 15 to 40 percent slopes .....	296
185—Poorman ashy loam, 35 to 65 percent slopes .....	298
186—Poorman, dry-Poorman complex, 15 to 35 percent slopes .....	299
187—Poorman-Grandad complex, 15 to 35 percent slopes .....	301
188—Poorman-Grandad complex, 35 to 75 percent slopes .....	303
189—Poorman-Grandad, dry complex, 15 to 35 percent slopes .....	305
190—Poorman-Grandad, dry complex, 35 to 65 percent slopes .....	306
191—Reggear-Kauder complex, 5 to 20 percent slopes .....	308
192—Reggear-Seddow complex, 5 to 15 percent slopes .....	310
193—Rettig ashy loam, 35 to 60 percent slopes .....	312
194—Rettig ashy loam, 15 to 35 percent slopes .....	313
195—Rettig ashy loam, cold, 15 to 35 percent slopes .....	314
196—Rettig, cool-Rettig, dry complex, 35 to 65 percent slopes .....	315
197—Rettig-Grandad complex, 35 to 70 percent slopes .....	317
198—Rettig-Township complex, 35 to 60 percent slopes .....	319
199—Rettig-Township-Stepoff complex, 35 to 70 percent slopes .....	321
200—Riswold-Cranberry complex, 5 to 20 percent slopes .....	323
201—Riswold-Grangemont complex, 15 to 35 percent slopes .....	325
202—Rock outcrop-Whiskeycreek-Texascreek complex, 40 to 70 percent slopes .....	327
203—Scaler ashy silt loam, 15 to 35 percent slopes .....	328
204—Scaler-Grandad complex, 35 to 60 percent slopes .....	330
205—Scaler-Grangemont complex, 15 to 45 percent slopes .....	331
206—Scand-Scaler complex, 15 to 35 percent slopes .....	333
207—Seddow ashy silt loam, 15 to 25 percent slopes .....	335
208—Seddow ashy silt loam, 25 to 50 percent slopes .....	336
209—Seddow ashy silt loam, 5 to 15 percent slopes .....	337
210—Setters silt loam, 3 to 8 percent slopes .....	338
211—Shattuck ashy silt loam, 15 to 35 percent slopes .....	339
212—Shattuck ashy silt loam, 35 to 65 percent slopes .....	340
213—Shattuck ashy silt loam, moist, 35 to 65 percent slopes .....	341
214—Shattuck-Dworshak complex, moist, 15 to 40 percent slopes .....	342
215—Shattuck-Dworshak complex, 15 to 35 percent slopes .....	344
216—Sly-Wilkins complex, 3 to 15 percent slopes .....	346
217—Southwick silt loam, 3 to 12 percent slopes .....	347
218—Southwick-Larkin complex, 12 to 25 percent slopes .....	348
219—Statemeadow-Reggear complex, 5 to 15 percent slopes .....	350
220—Swayne silt loam, 10 to 35 percent slopes .....	352
221—Taney ashy silt loam, 3 to 10 percent slopes .....	353
222—Taney-Joel complex, 10 to 20 percent slopes .....	354
223—Taney-McCrosket complex, 15 to 35 percent slopes .....	355
224—Taney-Setters complex, 3 to 8 percent slopes .....	357
225—Taney-Setters complex, 8 to 20 percent slopes .....	359
226—Teakean ashy silt loam, 35 to 50 percent slopes .....	360
227—Teneb ashy silt loam, 0 to 2 percent slopes .....	361
228—Texascreek-Rock outcrop complex, 45 to 75 percent slopes .....	363
229—Texascreek-Whiskeycreek complex, 35 to 75 percent slopes .....	364
230—Norwidge-Threebear complex, 5 to 25 percent slopes .....	366
231—Tomodo ashy silt loam, dry, 20 to 40 percent slopes .....	367
232—Tomodo-Lado complex, 15 to 35 percent slopes .....	369
233—Township-Rettig complex, 15 to 35 percent slopes .....	370



## Soil Survey of Clearwater Area, Idaho

234—Township-Rettig complex, 35 to 75 percent slopes .....	372
235—Township-Rettig-Nakarna complex, 35 to 65 percent slopes .....	374
236—Trapper Creek-Narnett complex, 5 to 15 percent slopes.....	376
237—Uvi ashy loam, 35 to 75 percent slopes.....	378
238—Uvi ashy silt loam, 35 to 75 percent slopes .....	379
239—Vaywood, high precipitation-Vaywood, dry complex, 15 to 35 percent slopes .....	380
240—Vaywood medial silt loam, 35 to 75 percent slopes .....	382
241—Vaywood-Handoff complex, 15 to 35 percent slopes.....	383
242—Water .....	385
243—Wellsbench silt loam, 2 to 10 percent slopes .....	385
244—Wellsbench-Lacy complex, 25 to 55 percent slopes .....	386
245—Wilkins silt loam, 0 to 5 percent slopes.....	388
<b>Use and Management of the Soils .....</b>	<b>389</b>
Interpretive Ratings .....	389
Rating Class Terms.....	389
Numerical Ratings .....	389
Crops and Pasture .....	390
Crops .....	390
Pastureland and Hayland .....	392
Yields per Acre.....	393
Land Capability Classification .....	394
Prime Farmland .....	395
Grazing Land.....	395
Rangeland .....	396
Forest Understory Vegetation .....	398
Agricultural Waste Management .....	401
Forestland Productivity and Management.....	404
Forestland Productivity .....	409
Forestland Management.....	410
Recreational Development.....	411
Wildlife Habitat .....	413
Engineering .....	415
Building Site Development.....	416
Sanitary Facilities.....	417
Construction Materials .....	419
Water Management .....	420
<b>Soil Properties .....</b>	<b>423</b>
Engineering Properties.....	423
Physical Properties .....	424
Chemical Properties.....	426
Water Features.....	426
Soil Features .....	428
<b>Classification of the Soils .....</b>	<b>429</b>
Taxonomic Units and Their Morphology .....	429
Agatha Series.....	430
Ahsahka Series .....	431
Aldermand Series.....	432
Aquandic Cryaquepts .....	433
Aquandic Dystrudepts .....	434
Aquandic Endoaquepts .....	436
Bandmill Series .....	437
Bargamin Series.....	439
Berthahill Series .....	440

# Soil Survey of Clearwater Area, Idaho

Bigtalk Series .....	442
Bouldercreek Series .....	444
Brequito Series .....	445
Brodeer Series .....	446
Burntcreek Series .....	448
Campra Series .....	449
Carlinton Series .....	451
Caseycreek Series .....	453
Cavendish Series .....	454
Cobbler Series .....	455
Cranberry Series .....	456
Crumarine Taxadjunct .....	458
Dowper Series .....	459
Driscoll Series .....	460
Dullaxe Series .....	462
Dworshak Series .....	463
Elkberry Series .....	464
Elkridge Series .....	466
Fico Series .....	467
Flewsie Series .....	468
Floodwood Series .....	469
Flumecreek Series .....	471
Fordcreek Series .....	472
Garveson Series .....	473
Gramil Series .....	474
Grandad Series .....	476
Grangemont Series .....	477
Grasshopper Series .....	479
Grice Series .....	481
Gwin Series .....	482
Handoff Series .....	483
Hildebrand Series .....	484
Hubub Series .....	485
Hucberit Series .....	487
Hugus Series .....	488
Itzee Series .....	490
Jacket Series .....	491
Jacot Series .....	493
Jaype Series .....	494
Joel Series .....	496
Johnson Series .....	498
Judgetown Series .....	499
Jury Series .....	500
Kauder Series .....	501
Keeler Series .....	504
Kettenbach Series .....	505
Keuterville Series .....	506
Klickson Series .....	507
Konkol Series .....	509
Kooskia Series .....	510
Kruse Series .....	512
Lacy Series .....	513
Lado Series .....	514
Larkin Series .....	515

## Soil Survey of Clearwater Area, Idaho

Latahco Series .....	517
Lebaron Series.....	519
Lewhand Series .....	521
Longbar Series.....	523
Longpen Series .....	525
Lostpete Series .....	526
Marblecreek Series .....	527
McCrosket Series.....	528
Meland Series .....	529
Mushel Series .....	530
Nakarna Series .....	532
Narnett Series .....	533
Neva Series.....	534
Newlig Series .....	535
Noil Series.....	537
Norwidge Series.....	538
Odonnell Series.....	540
Oxyaquic Xerofluvents .....	542
Placer Series.....	544
Poorman Series .....	545
Reggear Series .....	546
Rettig Series.....	547
Revling Series .....	550
Riswold Series .....	551
Scaler Series.....	552
Scand Series.....	554
Seddow Series .....	556
Setters Series.....	557
Shattuck Series .....	559
Sly Series.....	560
Southwick Series.....	561
Spacecreek Series .....	563
Statemeadow Series .....	565
Stepoff Series.....	566
Swayne Series .....	567
Taney Series .....	568
Teakean Series .....	570
Teneb Series .....	572
Texascreek Series.....	573
Threebear Series .....	574
Tomodo Series .....	576
Township Series .....	577
Trappercreek Series.....	580
Uvi Series.....	581
Vaywood Series .....	582
Weitas Series .....	584
Wellsbench Series .....	585
Whiskeycreek Series.....	586
Wilkins Series.....	587
<b>Formation of the Soils.....</b>	<b>589</b>
Soil-forming Factors .....	589
Parent Material .....	589
Climate.....	590
Vegetation .....	591

## Soil Survey of Clearwater Area, Idaho

Relief .....	592
Time .....	592
Soil Formation on Major Landforms .....	593
Canyons.....	593
Plateau.....	596
Mountains .....	600
<b>References</b> .....	605
<b>Glossary</b> .....	609
<b>Tables</b> .....	627
Table 1.—Temperature and Precipitation .....	628
Table 2.—Freeze Dates in Spring and Fall .....	631
Table 3.—Growing Season .....	633
Table 4.—Acreage and Proportionate Extent of the Soils .....	634
Table 5.—Ecological Sites, Plant Associations, and Characteristic Plant Communities .....	639
Table 6.—Nonirrigated Crop Yields .....	773
Table 7.—Land Capability Classification .....	777
Table 8.—Prime and other Important Farmland .....	795
Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge .....	797
Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow .....	850
Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment .....	931
Table 12.—Forest Productivity .....	1013
Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland .....	1097
Table 14.—Hazard of Erosion and Suitability for Roads on Forestland .....	1138
Table 15.—Forestland Planting .....	1177
Table 16.—Forestland Site Preparation .....	1205
Table 17.—Damage by Fire and Seedling Mortality on Forestland .....	1231
Table 18.—Camp Areas, Picnic Areas, and Playgrounds .....	1268
Table 19.—Paths, Trails, and Golf Fairways .....	1301
Table 20.—Dwellings and Small Commercial Buildings .....	1332
Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping .....	1365
Table 22.—Sanitary Facilities .....	1411
Table 23.—Source of Gravel, Sand, and Topsoil .....	1460
Table 24.—Source of Reclamation Material and Roadfill .....	1500
Table 25.—Ponds and Embankments .....	1549
Table 26.—Engineering Properties .....	1583
Table 27.—Physical Properties .....	1747
Table 28.—Chemical Properties .....	1819
Table 29.—Water Features .....	1894
Table 30.—Soil Features .....	1943
Table 31.—Taxonomic Classification of the Soils .....	1972

Issued 2011





# Foreword

---

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. Farmers, ranchers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

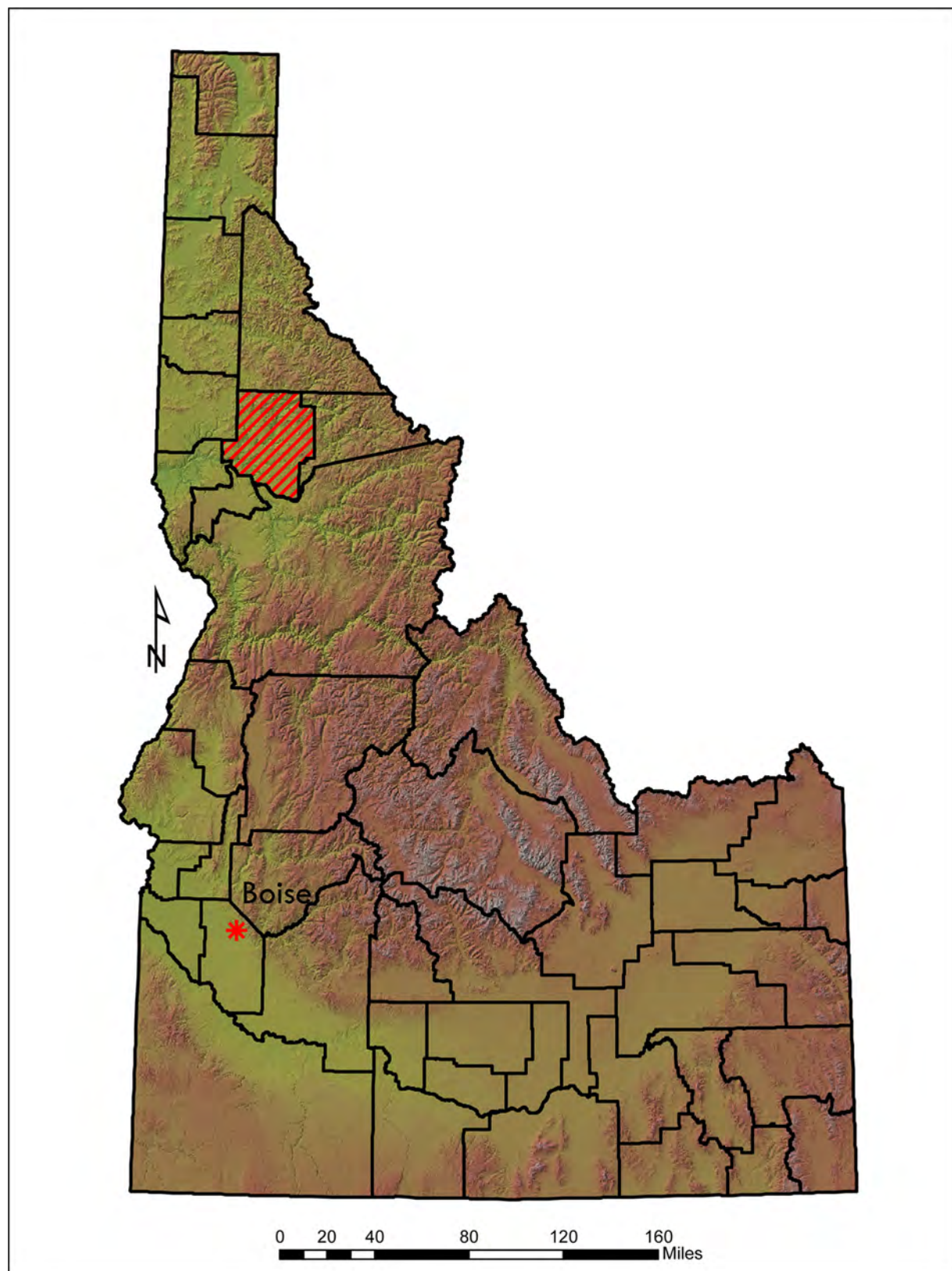
Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://soils.usda.gov/sqi/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app>) or your NRCS State Soil Scientist ([http://soils.usda.gov/contact/state\\_offices/](http://soils.usda.gov/contact/state_offices/)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each map unit is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Jeffery Burwell  
State Conservationist  
Natural Resources Conservation Service

# Soil Survey of Clearwater Area, Idaho



Location of Clearwater Area in Idaho.

# Soil Survey of Clearwater Area, Idaho

---

By Glenn Hoffman, Natural Resources Conservation Service

Fieldwork by Glenn Hoffman, Thomas W. Hahn, Mark P. Keller, Kimberley Johnson, P. Neil Peterson, Jr., and Karl W. Hipple, Natural Resources Conservation Service; and Brian Gardner, Brad Rust, Pamela L. Keller, and Eileen Rowan, Idaho Soil Conservation Commission

Forestry data collected by Don Larson, Ron Peyton, and Frank Gariglio, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service,  
in cooperation with  
United States Department of Agriculture, Forest Service; United States Department of the Interior, Bureau of Land Management; University of Idaho, College of Agriculture; and Idaho Soil Conservation Commission

CLEARWATER AREA is in northern Idaho. Clearwater County has a total area of 1,575,000 acres, or 2,461 square miles. Of this, 920,572 acres is in the survey area. The survey area is dominantly private land, but some of the land is administered by the State of Idaho, the Bureau of Land Management, and the Forest Service. A part of the area is in the Nez Perce Indian Reservation. The population of the county was 8,930 in 2000. The largest community, Orofino, had a population of 3,247 in 2000.

The southwestern half of the survey area is characterized by a rolling basalt plateau that is dissected by deep canyons. The plateau is mantled with deposits of loess that are tens of feet thick in some areas. Some areas of the plateau gradually slope northward, southward, and westward. The northeastern half of the survey area is in the Clearwater Mountains and is characterized by steep mountains and V-shaped valleys. The northwestern corner of Clearwater County is part of the Palouse region of the Inland Northwest.

The native vegetation is bunchgrass prairie at the lower elevations and coniferous forests in the cooler, more moist areas at the higher elevations. The major river is the Clearwater River, which forms the southern boundary of the survey area. The North Fork of the Clearwater River flows through the northern and western parts of the county and joins the main stem of the Clearwater River at Ahsahka. The North Fork is dammed at Ahsahka to form the Dworshak Reservoir.

## General Nature of the Survey Area

This section gives general information about the survey area. It describes climate, history and development, agriculture, and geology.

## Climate

Prepared by the Natural Resources Conservation Service, National Water and Climate Center, Portland, Oregon.

The climate tables were created from data recorded at the Dworshak Fish Hatchery, Elk River 1 S, and Headquarters climate stations in Idaho. Thunderstorm days, relative humidity, percent sunshine, and wind information were estimated from data recorded at the First Order station at Lewiston, Idaho.

[Table 1](#) gives data on the temperature and precipitation for the survey area as recorded in the period 1971 to 2000. [Table 2](#) shows probable dates of the first freeze in fall and the last freeze in spring. [Table 3](#) provides data on the length of the growing season.

In winter, the average temperature is 34.6 degrees F at Dworshak Fish Hatchery, 27.3 degrees at Elk River 1 S, and 27.7 degrees at Headquarters. The average daily minimum temperature in winter is 27.7 degrees, 18.8 degrees, and 18.8 degrees, respectively. The lowest temperatures on record are -15 degrees at Dworshak Fish Hatchery on December 30, 1968; -37 degrees at Elk River 1 S on December 30, 1968; and -28 degrees at Headquarters on December 31, 1968.

In summer, the average temperature is 70.0 degrees at Dworshak Fish Hatchery, 61.1 degrees at Elk River 1 S, and 60.3 degrees at Headquarters. The average daily maximum temperature in winter is 86.0 degrees, 77.4 degrees, and 77.1 degrees, respectively. The highest temperatures on record are 111 degrees at Dworshak Fish Hatchery on July 13, 1967; 107 degrees at Elk River on August 5, 1961; and 108 degrees at Headquarters on August 5, 1961.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total average annual precipitation in the survey area is highly dependent on the location and elevation. In general, the average annual precipitation increases moving northeastward from the Orofino and Kamiah areas. The total average annual precipitation is 25.49 inches at Dworshak Fish Hatchery, 46.54 inches at Elk River 1 S, and 39.47 inches at Headquarters. The Natural Resources Conservation Service mean annual precipitation maps developed by Oregon State University using the Parameter-elevation Regressions on Independent Slopes Model (PRISM) show that along the lower Clearwater River and for most of the length of Dworshak Reservoir the mean annual precipitation is 24 to 28 inches. The amount increases rapidly, however, as elevation increases. Most of the higher terrain in the survey area receives 35 to 50 inches annually, but the ridges north and east of Elk River receive as much as 62 inches. At the lower elevations, the growing season generally extends from April through October. About 40 percent of the mean annual precipitation, or about 10 to 12 inches, is received during this period. At the higher elevations, only about 10 to 20 percent of the annual precipitation falls during the warmest 6 months of the year. The heaviest 1-day precipitation during the period of record was 2.21 inches at Dworshak Fish Hatchery on December 2, 1977; 2.44 inches at Elk River 1 S on February 19, 1968; and 2.47 inches at Headquarters on May 7, 1979. Thunderstorms occur on about 16 days each year, and most occur from late in May to early in September.

The average seasonal snowfall is also highly dependent on elevation. For example, at Dworshak Fish Hatchery, which is at an elevation of about 1,000 feet, only 12.3 inches of snowfall is received in a normal winter. At Elk River, which is at an elevation of 2,920 feet, the average annual snowfall is 102.7 inches, and at Headquarters the average annual snowfall is 100.6 inches. The higher elevations receive more snowfall; more than 250 inches is common in the mountains. The greatest snow depth at any



one time during the period of record was 16 inches at Dworshak Fish Hatchery on February 1, 1969; 78 inches at Elk River 1 S on February 15, 1972; and 57 inches at Headquarters on January 12, 1972. On average, less than 10 days per year have at least 1 inch of snow on the ground at the lowest elevations, such as at Dworshak Fish Hatchery; however, snow is on the ground for 3 to 6 months at the higher elevations. The average number of days per year that at least 1 inch of snow is on the ground is 133 days at Elk River 1 S and 111 days at Headquarters. The heaviest 1-day snowfall on record was 10 inches at Dworshak Fish Hatchery on January 28, 1996; 20 inches at Elk River 1 S on December 28, 1968; and 30 inches at Headquarters on December 28, 1968.

The average relative humidity in midafternoon is about 25 percent in summer and 75 percent in December. Humidity is higher at night, and the average at dawn is about 60 percent in July and August and about 80 percent in winter. The sun shines about 75 percent of the time possible in summer and about 30 percent in winter. The prevailing wind is highly dependent on location, elevation, and exposure. In general, the winds follow the valleys, moving up the valleys during the day and down the valleys during the night. At Lewiston, the prevailing winds are generally from the southwest, except during fall and early in winter when they are from the northeast. The average windspeed is highest in spring, with the average at the lower elevations generally 8 to 10 miles per hour in March and April.

## History and Development

Prepared by the Clearwater Historical Society.

The area now making up Clearwater County was originally inhabited by various bands of the Nez Perce Indians. Permanent villages were along the Clearwater River, on what is now the western edge of the county. Hunting and fishing parties moved out into the rest of the county when travel was feasible. Different roots and berries were gathered in season. Favorite areas for gathering camas bulbs were Weippe Prairie and Musselshell Meadows, south of Pierce ([figs. 1 and 2](#)).

The first white men in the area were members of the Lewis and Clark Expedition. Probably the most difficult part of their journey was crossing the mountains in and adjacent to what is now Clearwater County. In September 1805, the Lewis and Clark Expedition, sick and nearly starved, emerged from the mountains into the Weippe Prairie and encountered the Nez Perce Indians. The expedition then descended to the forks of the Clearwater River, at present-day Orofino. They built five canoes from large ponderosa pine trees to travel on the navigable river. In early October they began their journey by water to the Pacific Ocean.

Other than possibly a few visits by missionaries, more than 59 years passed before white men returned to the Clearwater area. In the late 1850's, Captain Elias D. Pierce found some gold deposits along the Clearwater River. Because of restrictions imposed by the Indian Agency, he didn't return until 1860. At that time, he and a party of eight traveled around the Indian habitations and east of the forks of the Clearwater River. They camped one night on what they called Canal Gulch, and one member of the party made a significant gold discovery. A second much larger party later traveled into the area. In the winter of 1860 and 1861, two towns were established—Pierce City and Oro Fino City, which was about 2 miles south of Pierce City. Pierce City is the second oldest town in Idaho.

In order to bring organized government to this new area, the Washington Territorial Legislature included it in Spokane County. Soon after, the legislature created Shoshone County, with Pierce City as the county seat.

The eastern boundary of the county included western Montana to the Continental Divide. When the Idaho and Montana Territories were established in 1863, the present state line was designated, reducing the size of Shoshone County.



**Figure 1.—Camas bulb. Bulbs are about 1.5 to 2.0 inches in diameter.**

By 1864, many of the miners had moved on to other areas, such as Elk City, Florence, and Boise Basin. Chinese miners began moving into the area, and they soon outnumbered the white men. By the 1880's, it was becoming increasingly difficult for the small population of white men to fill county offices and provide services. Large mineral strikes in the Coeur d'Alene area shifted the population center to that area. In 1884, the county seat of Shoshone County was moved from Pierce City to Murray, Idaho. A few miners remained in Pierce City, and some ranchers and farmers became firmly established in the Weippe Prairie area, southwest of Pierce City.

In 1895, unallocated tracts of land on the Nez Perce Reservation were made available to white settlers. Shortly afterward, railroad construction began along the Clearwater River. With an increase in the population and the promise of a transportation system, interest in the area was renewed.

In 1898, C.C. Fuller subdivided a portion of his homestead at the mouth of Orofino Creek and established the town of Orofino, about 30 miles below Oro Fino City.

In 1899, the railroad to Orofino was completed and the new town became firmly established. Travel to the county seat of Wallace was extremely difficult, necessitating travel through five counties and one other state, a distance of about 200 miles. Various proposals were made to split off the southern part of Shoshone County and form a new county or to annex it to another existing county. In 1903, the legislature authorized the annexation of the southern part of Shoshone County to Nez Perce County. This proposal was passed at the general election in 1904, and the area was officially annexed to Nez Perce County in December of 1904. In February of 1911, the



**Figure 2.—Area of Lewhand-Teneb complex, 0 to 2 percent slopes, on Weippe Prairie, where camas grows in abundance.**

legislature voided the act that permitted the annexation and established the present-day Clearwater County with the county seat at Orofino.

Clearwater County has some of the most productive timberland east of the Cascade Mountains. In the early 1900's, various timber companies became interested in this resource. Timber harvesting became a principal industry in the county by the 1920's. The timber industry brought new life to the old town of Pierce City and contributed to the continued growth of Orofino. Although there is a small, fairly stable agricultural resource base in the county, the economic health of the county is dependent largely on the timber industry.

## **Agriculture**

Although agriculture is secondary to the forest industry in the survey area, it is an important part of the economy. Production of crops, hay, and forage were needed to support those in the logging and gold mining industries. As settlers arrived in the 1860's and 1870's, they started clearing land for cultivation. Acreage for cultivation was limited until the Nez Perce Reservation was opened to settlement in 1895. The mild climate in the lower canyons allowed for a variety of orchard and produce crops to be grown. By the early 1900's, the main fruits grown were apples, pears, cherries, and apricots. Also grown were prunes, plums, peaches, various berries, and some nuts and vegetables.

At first, only enough land was cultivated to meet local needs. When outside markets for wheat improved and became more accessible, it became a cash crop and more land was cleared of timber and used for agriculture. The southwestern part of the county, near the main stem of the Clearwater River, was the only area that had a climate favorable for crops and adequate access to transportation routes. It still remains the only acreage in the county cleared of timber and used for crop and forage production. At present, the major crops grown are soft white winter wheat, barley, dry



peas, and lentils. Minor crops are green peas, alfalfa hay, grass hay, rapeseed, canola, bluegrass seed, and oats. Most of the grain is shipped by barge to Portland, Oregon, where much is then exported.

Livestock operations are important in the survey area. When forests were opened up by logging, they provided an abundant forage resource for summer grazing. Sheep operations were dominant prior to 1950, with many bands arriving in large drives from as far away as central Washington. Sheep, however, have continually been replaced by beef cattle, with cow-calf operations being dominant. The lower canyons along the Clearwater, Snake, and Salmon Rivers are used for grazing in winter. The summer range provided by the forests is still important to the economic viability of many ranches in the area.

Local landowners recognized the problem of soil erosion and the need for an organized effort to conserve soil, sustain productive forests, and maintain other renewable resources by establishing the Clearwater Soil and Water Conservation District on March 25, 1946.

## Geology

Prepared by Terril Stevenson, state geologist, Natural Resources Conservation Service.

### Geomorphology

The survey area is dominantly in the Northern Rocky Mountains physiographic province. The southwestern part of the county around Orofino is in the Tristate Uplands Division of the Columbia Intermontane Province (Ross and Forrester, 1958).

The Northern Rocky Mountains province is characterized by dissected mountain ranges and somewhat narrow valleys with irregular stream patterns. The mountains consist mainly of massive intrusive granitic rock and exhibit generally accordant summit levels (Ross and Forrester, 1958). At the higher elevations, the valleys tend to be wider and more U-shaped as a result of glaciation. In Clearwater County, the Clearwater Mountains are generally a broad, deeply dissected plateau. The valleys tend to be narrow and steep, with broad crests or ridges between the drainageways. The present topography is a result of several incomplete erosion cycles, with stream drainage patterns controlled mainly by geologic structure. Pleistocene glaciation resulted in wider valleys and glacial landforms at an elevation of 5,000 feet or above and deposits of glacial material in valleys and on the plateau downstream at elevations as low as 3,000 feet (Othberg, 1982; Rember and Bennett, 1979a; Rember and Bennett, 1979b).

The Tristate Uplands Division of the Columbia Intermontane Province is a dissected basalt plateau drained by the Clearwater River. Topography in this section consists of rolling, broad uplands separated by deep, narrow, steep canyons cut into the plateau (Freeman and others, 1945).

The canyons of the Tristate Uplands area and the steep mountainsides of the Northern Rocky Mountains province have been formed by similar processes. They are both erosional landforms, and development is sometimes accelerated by joints and fractures or fault processes. The mountain drainageways that cut into the granitic rock create canyons that are similar to basalt canyons. The difference in appearance is due to the layering and vertical jointing of the basalt compared to the more uniform weathering of the granitic material. Basalt tends to "slab off" in massive blocks or chunks and form nearly vertical canyon walls. Granitic material tends to weather and break down to the grain size of the original crystalline material, ultimately producing sand and clay. This allows weathered granitic material to form the more typical "mountain" sloping topography.

The entire survey area is drained by the Clearwater River System. The area is drained westward to the Columbia Plateau. Drainage at the Columbia Plateau

boundary extends north into the Snake River-Columbia River system and then to the Pacific Ocean.

Many cycles of both stream and glacial erosion have contributed to the topography of the area. Remnant terraces or benches are in the higher mountains, and remnant gravel is on the ridges between drainageways at the lower elevations. Deep gravel outwash and valley train deposits from glaciation at the higher elevations are in some of the drainageways below an elevation of about 5,000 feet.

### **Stratigraphy**

Unconsolidated surface material consists dominantly of silt and clay of Quaternary alluvium, colluvium, and bedrock residuum. Thicker deposits of Quaternary alluvium and bedrock residuum cover much of the uplands. Thin deposits of sandy cobble and boulder stream alluvium are along most of the drainageways, and Quaternary gravel forms intermediate benches and terraces along most of the valleys and on the lower slopes of the mountain ranges. Colluvial deposits of Quaternary sand, gravel, and cobble talus cover most of the steep valleysides. Minor isolated deposits of landslide debris are along slopes of the steeper drainageways (Griggs, 1981; Othberg, 1982; Rember and Bennett, 1979a; Rember and Bennett, 1979b).

Tertiary igneous rock of the Columbia River Basalt and intercalated sediment of the Latah Formation blanket the southwestern third of the survey area. This material consists of vesicular basalt and lacustrine silt and clay. They were deposited over older Tertiary andesite and latite flows (Potato Hill and Kamiah Volcanics). Other Tertiary igneous rock includes intrusive pink granite and pyroxene gabbro in the eastern half of the county, extrusive rhyolite and quartz latite near the eastern border, and intrusive granite and diorite dikes scattered throughout the county (Heitanen, 1984; Rember and Bennett, 1979a; Rember and Bennett, 1979b).

Each basalt flow typically exhibits three different layers related to emplacement, cooling, thickness of original flow, and chemical makeup. The three parts are a thick colonnade or base section of regularly jointed massive rock, a thinner entablature or middle section jointed in small, irregular, blocky patterns, and a thin, vesicular or scoriaceous flowtop. The flowtop commonly is eroded or weathered, and it is nonexistent in some areas (Reidel, 1982).

Bedrock in the mountain ranges consists dominantly of hard, somewhat fractured, Cretaceous intrusive igneous rock of the Idaho Batholith and fractured, highly metamorphosed sedimentary rock of the Precambrian Belt Series (Rember and Bennett, 1979a).

The Idaho Batholith rock consists of granite, quartz diorite, quartz monzonite, gabbro, tonalite, and pegmatite dikes (extremely coarse-grained crystalline rock). Metamorphic rock associated with the batholith border zones mainly in the northeastern part and along the southwestern border of the county include gneiss, serpentine, and metadiabase (Heitanen, 1984; Hyndman, 1989; Rember and Bennett, 1979a; Rember and Bennett, 1979b).

The Precambrian Belt Series rock is throughout the county, especially in the northern half. This rock is metasediment consisting of quartzite, micaceous sandstone, argillite, shale, gneiss, schist, and marble. This metasediment actually belongs to different formations within the series, including the Libby Formation, Striped Peak Formation, Wallace Formation, Orofino Series, St. Regis Formation, Revett Formation, Burke Formation, and Prichard Formation. The Burke, Revett, and St. Regis Formations are combined into the Ravalli Group (Anderson, 1956; Rember and Bennett, 1979a; Rember and Bennett, 1979b). The Orofino Series rock near the town of Orofino contains an exceptionally pure crystalline limestone (marble) and beds of scapolite (lime in schist). Another important formation, the Blacklead Limestone, is near the head of Cayuse Creek, along the south-central border of the county (Anderson, 1956).



## Structure

The geologic structure in Clearwater County is complex. Precambrian metasediment was subject to alteration, folding, and faulting by Cretaceous and Tertiary intrusions of batholithic rock followed by intrusions of later Tertiary granite and diorite dikes. The northern half of the county is the border zone between Idaho Batholith granitic rock and Belt Series metasediment. The contact zone ranges from sharp with little contact-metamorphism to transitional with extensive formation of gneiss and crushed, deformed, mylonitic diorite and granite (Heitanen, 1984; Hyndman, 1989).

Bedrock in contact areas or zones between intrusive rock and the surrounding country rock is generally less resistant to weathering than either the unaffected country rock or the intrusive rock on either side of the contact. This is due to chemical interaction and alteration, which take place between the country rock and the intrusive body, and the increased fracturing, which also generally takes place in contact zones. Secondary or altered minerals in the contact zones commonly are less resistant to weathering forces and break down faster than the surrounding rock. The increase in fracturing also hastens the weathering process. This can lead to development of areas of flatter relief than the surrounding mountainous areas. These contact zones can affect large areas.

The dominant strike of the geologic structures is west-northwest, with steep dips in older rock and very slight dips in younger rock (Heitanen, 1984; Hyndman, 1989).

The Northern Rocky Mountains are in a relatively stable seismic zone. Risk of damage due to earth-shaking in this zone is slight. Small earthquakes, though not common, do occur. Measurable earthquakes in this zone were recorded in 1967 and 1975. The earthquake near Kamiah on December 26, 1975, was rated as 3.5 on the Richter Scale. No damage or adverse impact resulted from this event (Stover and others, 1986).

## Economic/Mining Geology

Clearwater County has been an important source of many economic minerals in Idaho. The combination of igneous intrusive rock and highly metamorphosed sediment with the complex geologic structure resulted in mineralization and formation of mineable deposits of gold, silver, copper, lead, zinc, iron ore, magnetite, wolframite (tungsten), rutile (titanium), asbestos, monazite (thorium), flourspar, garnet, and marble, mainly in the metamorphosed areas (Anderson, 1956; Hubbard, 1955). Gold and garnet are also present as placer deposits in alluvial and colluvial material throughout the county, weathered from vein and crystalline deposits upstream (Anderson, 1956). Nearly all of the streams in the area have been worked for gold, mainly by dredging and washing. This artisanal mining has removed much of the fine sediment in some drainageways, leaving only the coarse-grained fraction in the streambeds and banks.

Other economic deposits occur as thin, sub-bituminous coal beds in the Latah Formation or as clay deposits from hydrothermal alteration and weathering of granitic rock. The clay is mainly along the margins of the plateau and on ridges (Anderson, 1956; Hubbard, 1955).

## Soils

The origin of the soils in the survey area is directly related to the geology and geomorphology of the area. The soils and sediment are a complex mass of colluvial, alluvial, eolian, and residual origin and may be limy, variably porous, coarsely granular, and erosive. The valleys are generally narrow with thin soils and talus on the steep side slopes derived from erosion of the slopes and upland ridges. This sediment consists of alluvial, colluvial, and volcanic material of the Tertiary and Quaternary. The soils are generally silt, sand, and gravel. The valley floors are generally cut

into bedrock with gravel deposits from alluvial and glacial processes in benches, on terraces, and along the valley floor. There is little or no flood plain development associated with the river system in the survey area. The upland areas are characterized by thicker soils that developed over weathered bedrock and in bedrock residuum. Loess deposits are also present in some of the upland areas. Upland soils generally consist of clayey sand, clay, silt, and silty clay.

## How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in the survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret

the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# General Soil Map Units

---

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

The general soil map units in this survey area have been grouped into general kinds of landscape for broad interpretative purposes. The general soil map units in each of the broad groups are described in the following paragraphs.

## ***Soils on Stream Terraces, Drainageways, Flood Plains, and Basins***

### **1. Teneb-Lewhand-Burntcreek-Hildebrand-Aquandic Endoaquepts**

*Shallow to a fragipan and very deep, poorly drained to moderately well drained, nearly level to undulating soils that formed in mixed alluvium*

*Percentage of survey area:* 2 percent

*Landform:* Teneb—drainageways; Lewhand and Burntcreek—drainageways, basins; Hildebrand—stream terraces; Aquandic Endoaquepts—flood plains

*Elevation:* 1,000 to 4,000 feet

*Frost-free period:* 50 to 180 days

*Mean annual precipitation:* 25 to 50 inches

*Minor components:* Grasshopper, Spacecreek, and Itzee soils; Oxyaquic Xerofluvents; Lebaron and Latahco soils

*Major uses:* Grazing, watershed, wildlife habitat

### **2. Narnett-Aquandic Cryaquepts-Jury**

*Very deep, poorly drained and well drained, cold, nearly level to hilly soils that formed in mixed alluvium and colluvium derived from granite and/or gneiss*

*Percentage of survey area:* 2 percent

*Landform:* Narnett—stream terraces and mountain footslopes in basins; Aquandic Cryaquepts—flood plains; Jury—mountain slopes, ridges

*Elevation:* 2,200 to 5,200 feet

*Frost-free period:* 30 to 110 days

*Mean annual precipitation:* 37 to 60 inches

*Minor component:* Trappercreek soils

*Major uses:* Timber production, watershed, wildlife habitat, recreation

## ***Soils on Canyonsides and Benches***

### **3. Klickson-Agatha-Kettenbach**

*Moderately deep to very deep, well drained, undulating to very steep soils that formed in loess and/or colluvium and alluvium derived from basalt*

*Percentage of survey area:* 6 percent

*Landform:* Canyonsides ([fig. 3](#))

*Elevation:* 1,000 to 3,400 feet

*Frost-free period:* 80 to 180 days

*Mean annual precipitation:* 18 to 40 inches

*Minor components:* Keuterville, Gwin, Longpen, and Jacket soils; Rock outcrop

*Major uses:* Timber production, range, watershed, wildlife habitat, recreation



**Figure 3.—Area north of Peck, Idaho. Kettenbach-Keuterville association, 35 to 75 percent slopes, is on the steep canyonsides, and Wellsbench and Meland soils are on the benches. Nez Perce County is in the background, south of the Clearwater River.**



#### 4. Texascreek-Johnson-Whiskeycreek-Fordcreek

*Shallow to deep, well drained and somewhat excessively drained, rolling to very steep soils that formed in colluvium and residuum derived from granitic and metamorphic rock with loess influence*

*Percentage of survey area: 3 percent*

*Landform: Texascreek—canyonsides; Johnson—canyonsides, benches;*

*Whiskeycreek—canyonsides; Fordcreek—canyonsides, benches (fig. 4)*

*Elevation: 1,000 to 4,000 feet*

*Frost-free period: 80 to 180 days*

*Mean annual precipitation: 24 to 35 inches*

*Minor components: Rock outcrop; Swayne, Ahsahka, and Uvi soils*

*Major uses: Timber production, range, wildlife habitat*



Figure 4.—Area of Rock outcrop-Whiskeycreek-Texascreek complex, 40 to 70 percent slopes, along the Clearwater River.

## ***Soils Dominantly on Basalt Plateaus***

### **5. Taney-Carlinton**

*Moderately deep to a fragipan, moderately well drained, undulating to steep soils that formed in volcanic ash and loess*

*Percentage of survey area: 6 percent*

*Landform: Hills on plateaus and benches*

*Elevation: 1,100 to 4,000 feet*

*Frost-free period: 80 to 180 days*

*Mean annual precipitation: 24 to 45 inches*

*Minor components: Seddow, Setters, Cavendish, Joel, Driscoll, and Kooskia soils*

*Major uses: Crops, pasture, timber production*

### **6. Grangemont-Kauder-Riswold**

*Moderately deep to a fragipan and very deep, moderately well drained and well drained, undulating to very steep soils that formed in a mantle of volcanic ash over loess and colluvium derived from basalt*

*Percentage of survey area: 22 percent*

*Landform: Grangemont and Kauder—hills on plateaus and benches, Riswold—canyonsides, hills on plateaus and benches*

*Elevation: 1,040 to 4,300 feet*

*Frost-free period: 50 to 125 days*

*Mean annual precipitation: 24 to 55 inches*

*Minor components: Elkridge, Reggear, Jaype, and Campra soils*

*Major uses: Timber production, watershed, recreation, wildlife habitat*

## ***Soils on Mountains***

### **7. Kruse-Noil-Uvi**

*Deep and very deep, well drained, rolling to very steep soils that formed in loess and volcanic ash over colluvium and residuum derived from granitic, basaltic, and metamorphic rock*

*Percentage of survey area: 3 percent*

*Landform: Kruse—canyonsides, mountain slopes, ridges; Noil—mountain slopes, ridges; Uvi—canyonsides, mountain slopes*

*Elevation: 1,500 to 5,000 feet*

*Frost-free period: 50 to 125 days*

*Mean annual precipitation: 24 to 65 inches*

*Minor components: Rock outcrop; Aldermand, Keeler, and Teakean soils*

*Major uses: Timber production, watershed, recreation, wildlife habitat*

### **8. Brodeer-Dullaxe-Mushel-Bouldercreek**

*Very deep, well drained, undulating to very steep soils that formed in volcanic ash over colluvium and residuum derived from granitic and metamorphic rock*

*Percentage of survey area: 39 percent*

*Landform: Mountain slopes, ridges*

*Elevation:* 1,600 to 5,200 feet

*Frost-free period:* 50 to 110 days

*Mean annual precipitation:* 25 to 65 inches

*Minor components:* Judgetown, Aldermand, Brequito, and Keeler soils

*Major uses:* Timber production, watershed, recreation, wildlife habitat

## **9. Grandad-Rettig-Township**

*Very deep, well drained, rolling to very steep soils that formed in volcanic ash over colluvium derived from schist, gneiss, and mica schist*

*Percentage of survey area:* 13 percent

*Landform:* Mountain slopes, ridges

*Elevation:* 1,600 to 5,000 feet

*Frost-free period:* 50 to 110 days

*Mean annual precipitation:* 30 to 65 inches

*Minor components:* Poorman, Scaler, Nakarna, and Scand soils

*Major uses:* Timber production, watershed, recreation, wildlife habitat

## **10. Vaywood-Berthahill-Hucberit**

*Very deep, well drained, cold, undulating to very steep soils that formed in volcanic ash over colluvium derived from metamorphic rock*

*Percentage of survey area:* 2 percent

*Landform:* Mountain slopes, ridges

*Elevation:* 3,700 to 5,820 feet

*Frost-free period:* 30 to 100 days

*Mean annual precipitation:* 40 to 65 inches

*Minor components:* Fico, Weitas, and Handoff soils

*Major uses:* Timber production, watershed, recreation, wildlife habitat

## **11. Water**

*Percentage of survey area:* 2 percent



# Detailed Soil Map Units

---

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Minor soil components that have properties similar to those of the dominant soil or soils in the map unit do not affect use and management. They are called noncontrasting, or similar, components. They typically are not mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. The soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name

of a soil phase commonly indicates a feature that affects use or management. For example, Carlinton ashy silt loam, 3 to 20 percent slopes, is a phase of the Carlinton series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Grangemont-Kauder complex, 5 to 20 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Klickson-Kettenbach association, 35 to 90 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Aquandic Endoaquepts and Aquandic Dystrudepts soils, 0 to 10 percent slopes, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Each detailed soil map unit is assigned to a major land resource area (MLRA) (USDA Agriculture Handbook 296). The MLRA for each detailed soil map unit is given in this section. Some map units, such as Rock outcrop, Water, and other miscellaneous areas, may not be assigned to a single MLRA because the unit can occur in any MLRA.

[Table 4](#) gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

The survey area was mapped at two levels of detail. At the most detailed level, map unit boundaries were plotted and verified at closely spaced intervals. The valleys and rolling plateaus, used primarily as cropland, were mapped at the most detailed level. At the less detailed level, map unit boundaries were plotted and verified at wider intervals. The canyons and mountains were mapped at this level of detail. The detail of mapping was selected to meet the anticipated long-term use of the survey area, and the map units were designed to meet the needs for that use.

## **1—Agatha-Rock outcrop complex, 35 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,200 to 3,000 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days



### **Map Unit Composition**

*Agatha, very rocky, and similar soils:* 70 percent

*Rock outcrop:* 15 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Agatha, Very Rocky**

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oa—1 to 2 inches; highly decomposed plant material

A—2 to 5 inches; ashy silt loam

AB—5 to 9 inches; gravelly ashy silt loam

Bt1—9 to 20 inches; very gravelly silt loam

Bt2—20 to 60 inches; extremely cobbly silty clay loam

R—60 to 70 inches; unweathered bedrock

### **Characteristics of Rock Outcrop**

*Description of areas:* Exposures of bare bedrock

### **Dissimilar Minor Components**

#### **Kettenbach soils**

*Percentage of map unit:* 6 percent

*Landform:* Convex side slopes of canyons

#### **Gwin soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex side slopes of canyons

#### **Carlinton soils**

*Percentage of map unit:* 4 percent

*Landform:* Hillslopes

## **2—*Agatha ashy silt loam, 15 to 40 percent slopes***

### ***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,200 to 3,000 feet

*Mean annual precipitation:* 27 to 33 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### ***Map Unit Composition***

*Agatha and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### ***Characteristics of Agatha***

#### **Setting**

*Landform:* Canyons, structural benches

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/ninebark (CN506)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oa—1 to 2 inches; highly decomposed plant material

A—2 to 5 inches; ashy silt loam

AB—5 to 9 inches; gravelly ashy silt loam

Bt1—9 to 20 inches; very gravelly silt loam

Bt2—20 to 60 inches; extremely cobbly silty clay loam

R—60 to 70 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Carlinton soils**

*Percentage of map unit:* 4 percent

*Landform:* Benches in canyons

#### **Joel soils**

*Percentage of map unit:* 4 percent

*Landform:* Benches in canyons

**Longpen soils**

*Percentage of map unit:* 4 percent

*Landform:* Concave side slopes of canyons, benches in canyons

**Rock outcrop**

*Percentage of map unit:* 4 percent

*Landform:* Convex areas on side slopes of canyons

**Seddow soils**

*Percentage of map unit:* 4 percent

*Landform:* Benches in canyons

**3—Agatha ashy silt loam, 40 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,200 to 3,000 feet

*Mean annual precipitation:* 27 to 33 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Agatha and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

***Characteristics of Agatha***

**Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Southeast

*Aspect (range):* Northeast to southwest (clockwise)

**Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 40 to 75 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oa—1 to 2 inches; highly decomposed plant material

A—2 to 5 inches; ashy silt loam

AB—5 to 9 inches; gravelly ashy silt loam

Bt1—9 to 20 inches; very gravelly silt loam  
Bt2—20 to 60 inches; extremely cobbly silty clay loam  
R—60 to 70 inches; unweathered bedrock

***Dissimilar Minor Components***

**Rock outcrop**

*Percentage of map unit:* 7 percent  
*Landform:* Convex areas on side slopes of canyons

**Klickson soils**

*Percentage of map unit:* 4 percent  
*Landform:* Convex side slopes of canyons

**Kettenbach soils**

*Percentage of map unit:* 3 percent  
*Landform:* Canyons

**Longpen soils**

*Percentage of map unit:* 3 percent  
*Landform:* Benches in canyons

**Seddow soils**

*Percentage of map unit:* 3 percent  
*Landform:* Benches in canyons

**Wellsbench soils**

*Percentage of map unit:* 3 percent  
*Landform:* Convex knobs on side slopes of canyons

**Gwin soils**

*Percentage of map unit:* 2 percent  
*Landform:* Canyons

***4—Ahsahka-Fordcreek complex, 20 to 40 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,000 to 2,200 feet  
*Mean annual precipitation:* 24 to 25 inches  
*Mean annual air temperature:* 45 to 52 degrees F  
*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Ahsahka and similar soils:* 45 percent  
*Fordcreek and similar soils:* 40 percent  
*Dissimilar minor components:* 15 percent

***Characteristics of Ahsahka***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* South  
*Aspect (range):* East to southwest (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or alluvium derived from granite  
*Slope range:* 20 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

**Typical profile**

A—0 to 6 inches; silt loam  
AB—6 to 16 inches; silt loam  
Bt1—16 to 35 inches; loam  
2Bt2—35 to 60 inches; clay

***Characteristics of Fordcreek***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* South  
*Aspect (range):* East to southwest (clockwise)

**Properties and qualities**

*Parent material:* Loess over residuum derived from granite and/or metamorphic rock  
*Slope range:* 20 to 40 percent  
*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 6.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

**Typical profile**

A—0 to 6 inches; loam  
Bt1—6 to 16 inches; loam  
Bt2—16 to 27 inches; clay loam  
Bt3—27 to 41 inches; clay loam  
Cr—41 to 51 inches; weathered bedrock

***Dissimilar Minor Components***

**Whiskeycreek soils**

*Percentage of map unit:* 10 percent

*Landform:* Convex areas on side slopes of canyons

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes of canyons

**5—Ahsahka-Whiskeycreek complex, 35 to 55 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,200 to 2,800 feet

*Mean annual precipitation:* 24 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Ahsahka and similar soils:* 50 percent

*Whiskeycreek and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Ahsahka***

**Setting**

*Landform:* Canyons

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to west (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or alluvium derived from granite

*Slope range:* 35 to 55 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Douglas-fir/ninebark (CN260)

**Typical profile**

A—0 to 6 inches; silt loam

AB—6 to 16 inches; silt loam

Bt1—16 to 35 inches; loam

2Bt2—35 to 60 inches; clay



### ***Characteristics of Whiskeycreek***

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to west (clockwise)

#### **Properties and qualities**

*Parent material:* Colluvium derived from granite and/or gneiss

*Slope range:* 35 to 55 percent

*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very low (about 1.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE  
(R009XY026ID)

#### **Typical profile**

A—0 to 4 inches; coarse sandy loam

Bw—4 to 9 inches; coarse sandy loam

C—9 to 15 inches; gravelly loamy coarse sand

R—15 to 25 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Fordcreek soils**

*Percentage of map unit:* 14 percent

*Landform:* Benches in canyons

#### **Rock outcrop**

*Percentage of map unit:* 6 percent

*Landform:* Convex areas on side slopes of canyons

## ***6—Aldermant ash loam, 35 to 75 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 4,000 feet

*Mean annual precipitation:* 30 to 35 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Aldermant and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### ***Characteristics of Aldermand***

#### **Setting**

*Landform:* Canyons, mountain slopes

*Geomorphic position (three-dimensional):* Mountain flanks, side slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* West to east (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or alluvium derived from granite and/or metamorphic rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 20 to 55 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 17 inches; ashy loam

2Bw2—17 to 25 inches; sandy loam

2BC—25 to 33 inches; sandy loam

2C1—33 to 44 inches; gravelly sandy loam

2C2—44 to 62 inches; very stony loamy sand

### ***Dissimilar Minor Components***

#### **Boulder creek soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Elkridge soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex side slopes of canyons

#### **Kruse soils**

*Percentage of map unit:* 3 percent

*Landform:* Rims of canyons

#### **Rock outcrop**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of mountain slopes, convex areas on side slopes of canyons

#### **Keeler soils**

*Percentage of map unit:* 2 percent

*Landform:* Smooth mountain slopes

## **7—Aldermant ash loam, 35 to 70 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,800 to 2,450 feet

*Mean annual precipitation:* 40 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Aldermant and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Aldermant**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* West to east (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or alluvium derived from granite and/or metamorphic rock

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* 20 to 55 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/queencup beadrily (CN570)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 17 inches; ashy loam

2Bw2—17 to 25 inches; sandy loam

2BC—25 to 33 inches; sandy loam

2C1—33 to 44 inches; gravelly sandy loam

2C2—44 to 62 inches; very stony loamy sand

### **Dissimilar Minor Components**

#### **Boulder creek soils, wet**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes, some of which are concave

## **8—Aldermant ash loam, dry, 35 to 70 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 4,200 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Aldermant, dry, and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

### **Characteristics of Aldermant, Dry**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or alluvium derived from granite and/or metamorphic rock

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* 20 to 55 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 17 inches; ashy loam

2Bw2—17 to 25 inches; sandy loam

2BC—25 to 33 inches; sandy loam

2C1—33 to 44 inches; gravelly sandy loam

2C2—44 to 62 inches; very stony loamy sand

### **Dissimilar Minor Components**

#### **Boulder creek soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

**Mushel soils, dry**

*Percentage of map unit:* 4 percent

*Landform:* Convex and smooth mountain slopes

**Rock outcrop**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of mountain slopes

**Aldermund soils**

*Percentage of map unit:* 2 percent

*Landform:* Concave mountain slopes

**Grandad soils, dry**

*Percentage of map unit:* 2 percent

*Landform:* Concave mountain slopes

**Keeler soils, dry**

*Percentage of map unit:* 2 percent

*Landform:* Mountain slopes

**Rettig soils**

*Percentage of map unit:* 2 percent

*Landform:* Concave head slopes of mountains

**9—Aquandic Cryaquepts, 0 to 5 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,200 to 4,800 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

***Map Unit Composition***

*Aquandic Cryaquepts and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Aquandic Cryaquepts***

**Setting**

*Landform:* Flood plains

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 5 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Frequent (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the surface to a depth of about 24 inches (see Water Features table)

*Salinity (maximum):* Not saline



*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6w

*Ecological site:* MEADOW (R009XY018ID)

**Typical profile**

A1—0 to 8 inches; ashy fine sandy loam

A2—8 to 18 inches; loam

A3—18 to 27 inches; loam

Cg1—27 to 54 inches; sandy loam

Cg2—54 to 60 inches; stratified very cobbly sand to very gravelly loam

***Dissimilar Minor Components***

**Grice soils**

*Percentage of map unit:* 7 percent

*Landform:* Flood plains, depressions near streams, saturated areas below springs on hillslopes

**Dumps, spoil**

*Percentage of map unit:* 3 percent

*Landform:* Flood plains

***10—Aquandic Endoaquepts and Aquandic Dystrudepts  
soils, 0 to 10 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Aquandic Endoaquepts and similar soils:* 60 percent

*Aquandic Dystrudepts and similar soils:* 20 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Aquandic Endoaquepts***

**Setting**

*Landform:* Drainageways

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

## Soil Survey of Clearwater Area, Idaho

*Seasonal high water table (minimum depth):* At the surface to a depth of about 24 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.4 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* MEADOW (R009XY018ID)

### **Typical profile**

A—0 to 10 inches; ashy silt loam

Bg—10 to 52 inches; loam

C—52 to 60 inches; sandy loam

## ***Characteristics of Aquandic Dystrudepts***

### **Setting**

*Landform:* Flood plains, drainageways

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (range):* All aspects

### **Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 10 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 7 to 19 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* DRY MEADOW (R009XY019ID)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 10 inches; gravelly ashy loam

Bw—10 to 31 inches; extremely gravelly sandy loam

C—31 to 70 inches; extremely gravelly sandy loam

## ***Dissimilar Minor Components***

### **Spacecreek soils**

*Percentage of map unit:* 14 percent

*Landform:* Stream terraces

### **Dumps, placer mining waste**

*Percentage of map unit:* 3 percent

### **Teneb soils**

*Percentage of map unit:* 3 percent

*Landform:* Drainageways

## **11—Bandmill-Grangemont-Bargamin complex, 10 to 35 percent slopes**

### **Map Unit Setting**

General landscape: Plateaus  
Major land resource area (MLRA): 43A—Northern Rocky Mountains  
Elevation: 3,100 to 3,400 feet  
Mean annual precipitation: 35 to 40 inches  
Mean annual air temperature: 38 to 44 degrees F  
Frost-free period: 50 to 110 days

### **Map Unit Composition**

Bandmill, dry, and similar soils: 40 percent  
Grangemont and similar soils: 30 percent  
Bargamin and similar soils: 25 percent  
Dissimilar minor component: 5 percent

### **Characteristics of Bandmill, Dry**

#### **Setting**

Landform: Hills  
Downslope shape: Linear  
Across-slope shape: Linear  
Aspect (representative): Southwest  
Aspect (range): Southeast to northwest (clockwise)

#### **Properties and qualities**

Parent material: Volcanic ash over loess over colluvium derived from basalt  
Slope range: 10 to 35 percent  
Depth to restrictive feature: None within a depth of 60 inches  
Drainage class: Well drained  
Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high  
Flooding frequency: None  
Ponding frequency: None  
Seasonal high water table (minimum depth): More than 72 inches  
Salinity (maximum): Not saline  
Sodicity (maximum): Not sodic  
Available water capacity (entire profile): High (about 11.6 inches)

#### **Interpretive groups**

Land capability subclass (nonirrigated): 6e  
Plant community class: Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 3 inches; ashy silt loam  
Bw—3 to 10 inches; ashy silt loam  
2Bt—10 to 21 inches; silt loam  
2E/Bt—21 to 27 inches; silt loam  
3Btb—27 to 62 inches; silty clay loam

### **Characteristics of Grangemont**

#### **Setting**

Landform: Hillslopes  
Downslope shape: Convex  
Across-slope shape: Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to northwest (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 10 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 18.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 14 inches; ashy silt loam

2B/E—14 to 38 inches; silt loam

2Bt—38 to 95 inches; silty clay loam

## ***Characteristics of Bargamin***

### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to northwest (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 10 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; ashy silt loam

Bw—2 to 17 inches; ashy silt loam

2Bt—17 to 38 inches; silt loam

3Btb—38 to 65 inches; silty clay loam

***Dissimilar Minor Component***

**Elkridge soils**

*Percentage of map unit:* 5 percent

*Landform:* Steep side slopes of canyons

**12—*Bandmill-Riswold complex, 5 to 20 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,200 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Bandmill and similar soils:* 40 percent

*Riswold and similar soils:* 30 percent

*Dissimilar minor components:* 30 percent

***Characteristics of Bandmill***

**Setting**

*Landform:* Hills, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; ashy silt loam

Bw—3 to 10 inches; ashy silt loam

2Bt—10 to 21 inches; silt loam

2E/Bt—21 to 27 inches; silt loam

3Btb—27 to 62 inches; silty clay loam



### ***Characteristics of Riswold***

#### **Setting**

*Landform:* Hills, structural benches

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.4 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; ashy silt loam

Bw—9 to 17 inches; ashy silt loam

2E/B—17 to 27 inches; silt loam

2B/E—27 to 44 inches; silt loam

3Bt1—44 to 60 inches; cobbly silty clay loam

3Bt2—60 to 72 inches; very cobbly silty clay loam

### ***Dissimilar Minor Components***

#### **Grangemont soils**

*Percentage of map unit:* 10 percent

*Landform:* Concave benches on mountain slopes

#### **Kauder soils**

*Percentage of map unit:* 10 percent

*Landform:* Concave benches in canyons, hills on plateaus

#### **Campra soils**

*Percentage of map unit:* 6 percent

*Landform:* Convex side slopes of canyons

#### **Elkridge soils**

*Percentage of map unit:* 4 percent

*Landform:* Convex side slopes of canyons

## ***13—Berthahill-Handoff complex, 15 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 5,000 to 5,500 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

### **Map Unit Composition**

*Berthahill, moist, and similar soils:* 75 percent

*Handoff and similar soils:* 15 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Berthahill, Moist**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* North

*Aspect (range):* West to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Mountain hemlock/queencup beadlily (CN685)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 4 inches; moderately decomposed plant material

A—4 to 11 inches; medial loam

Bw1—11 to 20 inches; medial loam

2Bw2—20 to 28 inches; gravelly sandy loam

2Bt1—28 to 40 inches; very gravelly loam

2Bt2—40 to 55 inches; extremely cobbly sandy loam

2Bt3—55 to 66 inches; extremely cobbly sandy loam

### **Characteristics of Handoff**

#### **Setting**

*Landform:* Drainageways

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* North

*Aspect (range):* West to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from metamorphic rock and/or granite

## Soil Survey of Clearwater Area, Idaho

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 17 to 30 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Sitka alder/miner's lettuce (CN001)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 11 inches; medial loam

A2—11 to 22 inches; medial loam

Bw1—22 to 30 inches; gravelly medial loam

2Bw2—30 to 45 inches; very gravelly loam

2BC—45 to 54 inches; extremely gravelly sandy loam

2C—54 to 64 inches; extremely cobbly loamy coarse sand

### ***Dissimilar Minor Components***

#### **Fico soils, warm**

*Percentage of map unit:* 8 percent

*Landform:* Convex mountain slopes

#### **Weitas soils**

*Percentage of map unit:* 2 percent

*Landform:* Concave mountain slopes

## **14—Berthahill-Handoff complex, 35 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,500 to 5,500 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

### ***Map Unit Composition***

*Berthahill and similar soils:* 70 percent

*Handoff and similar soils:* 20 percent

*Dissimilar minor component:* 10 percent

### ***Characteristics of Berthahill***

#### **Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Linear

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 14 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Subalpine fir/queencup beadlily (CN620)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 4 inches; moderately decomposed plant material

A—4 to 11 inches; medial loam

Bw1—11 to 20 inches; medial loam

2Bw2—20 to 28 inches; gravelly sandy loam

2Bt1—28 to 40 inches; very gravelly loam

2Bt2—40 to 55 inches; extremely cobbly sandy loam

2Bt3—55 to 66 inches; extremely cobbly sandy loam

## ***Characteristics of Handoff***

### **Setting**

*Landform:* Drainageways

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from metamorphic rock and/or granite

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 17 to 30 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Sitka alder/miner's lettuce (CN001)*

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 11 inches; medial loam

A2—11 to 22 inches; medial loam

Bw1—22 to 30 inches; gravelly medial loam

2Bw2—30 to 45 inches; very gravelly loam

2BC—45 to 54 inches; extremely gravelly sandy loam

2C—54 to 64 inches; extremely cobbly loamy coarse sand

***Dissimilar Minor Component***

**Weitas soils**

*Percentage of map unit: 10 percent*

*Landform: Concave mountain slopes*

**15—Berthahill-Shattuck complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape: Mountains*

*Major land resource area (MLRA): 43A—Northern Rocky Mountains*

*Elevation: 4,500 to 5,500 feet*

*Mean annual precipitation: 45 to 55 inches*

*Mean annual air temperature: 38 to 44 degrees F*

*Frost-free period: 30 to 110 days*

***Map Unit Composition***

*Berthahill and similar soils: 65 percent*

*Shattuck and similar soils: 15 percent*

*Dissimilar minor components: 20 percent*

***Characteristics of Berthahill***

**Setting**

*Landform: Mountain slopes, ridges*

*Downslope shape: Convex*

*Across-slope shape: Convex*

*Aspect (representative): Northwest*

*Aspect (range): Southwest to northeast (clockwise)*

**Properties and qualities**

*Parent material: Volcanic ash over colluvium derived from quartzite*

*Slope range: 15 to 35 percent*

*Depth to restrictive feature: 14 to 20 inches to strongly contrasting textural stratification*

*Drainage class: Well drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: None*

*Ponding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*



## Soil Survey of Clearwater Area, Idaho

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Subalpine fir/queencup beadlily (CN620)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 4 inches; moderately decomposed plant material

A—4 to 11 inches; medial loam

Bw1—11 to 20 inches; medial loam

2Bw2—20 to 28 inches; gravelly sandy loam

2Bt1—28 to 40 inches; very gravelly loam

2Bt2—40 to 55 inches; extremely cobbly sandy loam

2Bt3—55 to 66 inches; extremely cobbly sandy loam

### ***Characteristics of Shattuck***

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; gravelly clay loam

2Bt2—30 to 63 inches; extremely cobbly clay loam

### ***Dissimilar Minor Components***

#### **Fico soils, warm**

*Percentage of map unit:* 10 percent

*Landform:* Concave mountain slopes, ridges

**Handoff soils**

*Percentage of map unit:* 10 percent

*Landform:* Concave mountain slopes

**16—*Bigtalk, cool-Bigtalk, wet complex, 35 to 65 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,850 to 2,600 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Bigtalk, cool, and similar soils:* 60 percent

*Bigtalk, wet, and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Bigtalk, Cool***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Colluvium derived from anorthosite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/queencup beadlily (CN570)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A1—1 to 3 inches; loam

A2—3 to 8 inches; loam

Bt—8 to 35 inches; loam

BC—35 to 48 inches; gravelly loam

C—48 to 61 inches; fine sandy loam

### ***Characteristics of Bigtalk, Wet***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Colluvium derived from anorthosite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A1—1 to 3 inches; loam

A2—3 to 8 inches; loam

Bt—8 to 35 inches; loam

BC—35 to 48 inches; gravelly loam

C—48 to 61 inches; fine sandy loam

### ***Dissimilar Minor Components***

#### **Brequito soils, cool**

*Percentage of map unit:* 6 percent

*Landform:* Benches on mountain slopes

#### **Keeler soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

#### **Bigtalk soils, moist**

*Percentage of map unit:* 4 percent

*Landform:* Drainageways

## ***17—Bigtalk loam, 35 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,200 feet

*Mean annual precipitation:* 36 to 38 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Bigtalk and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Bigtalk**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Colluvium derived from anorthosite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/wild ginger (CN516)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A1—1 to 3 inches; loam

A2—3 to 8 inches; loam

Bt—8 to 35 inches; loam

BC—35 to 48 inches; gravelly loam

C—48 to 61 inches; fine sandy loam

### **Dissimilar Minor Components**

#### **Floodwood soils, warm, dry**

*Percentage of map unit:* 10 percent

*Landform:* Benches on mountain slopes

#### **Longbar soils**

*Percentage of map unit:* 10 percent

*Landform:* Concave mountain slopes

## **18—Bigtalk-Floodwood complex, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,000 feet

*Mean annual precipitation:* 40 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Bigtalk, cool, and similar soils:* 50 percent  
*Floodwood, cool, and similar soils:* 40 percent  
*Dissimilar minor components:* 10 percent

### **Characteristics of Bigtalk, Cool**

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Colluvium derived from anorthosite and/or gneiss  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western hemlock/queencup beadlily (CN570)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material  
A1—1 to 3 inches; loam  
A2—3 to 8 inches; loam  
Bt—8 to 35 inches; loam  
BC—35 to 48 inches; gravelly loam  
C—48 to 61 inches; fine sandy loam

### **Characteristics of Floodwood, Cool**

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or anorthosite  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None



## Soil Survey of Clearwater Area, Idaho

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/maidenhair fern (CN560)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt1—13 to 35 inches; loam

2Bt2—35 to 55 inches; fine sandy loam

2C—55 to 63 inches; fine sandy loam

### ***Dissimilar Minor Components***

#### **Garveson soils**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

#### **Odonnell soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches

## **19—Bigtalk-Keeler complex, 15 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,700 to 4,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Bigtalk, cool, and similar soils:* 75 percent

*Keeler, cool, and similar soils:* 20 percent

*Dissimilar minor component:* 5 percent

### ***Characteristics of Bigtalk, Cool***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Colluvium derived from anorthosite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

## Soil Survey of Clearwater Area, Idaho

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western hemlock/queencup beadleily (CN570)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A1—1 to 3 inches; loam

A2—3 to 8 inches; loam

Bt—8 to 35 inches; loam

BC—35 to 48 inches; gravelly loam

C—48 to 61 inches; fine sandy loam

### ***Characteristics of Keeler, Cool***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western hemlock/queencup beadleily (CN570)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam

2Bt2—39 to 48 inches; gravelly sandy loam

2C—48 to 74 inches; gravelly sandy loam

### ***Dissimilar Minor Component***

### **Bigtalk soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes

## **20—Bouldercreek ashy loam, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,200 to 4,650 feet

*Mean annual precipitation:* 50 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Bouldercreek, moist, and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Bouldercreek, Moist**

#### **Setting**

*Landform:* Broad ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 26 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

Bw1—8 to 21 inches; ashy loam

2Bw2—21 to 27 inches; gravelly loam

2Bw3—27 to 34 inches; very gravelly sandy loam

2BC—34 to 53 inches; very cobbly coarse sandy loam

2C—53 to 69 inches; very gravelly loamy sand

### **Dissimilar Minor Components**

#### **Dullaxe soils**

*Percentage of map unit:* 10 percent

*Landform:* Concave mountain slopes, broad ridges

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes, sharp ridges

**21—Bouldercreek ashy silt loam, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,600 to 5,000 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Bouldercreek and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

***Characteristics of Bouldercreek***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Convex

*Aspect (representative):* North

*Aspect (range):* West to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/wild ginger (CN575)

**Typical profile**

A—0 to 2 inches; ashy silt loam

Bw1—2 to 15 inches; silt loam

2Bw2—15 to 26 inches; very gravelly sandy loam

2C—26 to 60 inches; extremely gravelly sandy loam

***Dissimilar Minor Components***

**Bouldercreek soils, deep**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Flewsie soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes

**Marblecreek soils**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

**Nakarna soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

**22—Bouldercreek ashy silt loam, 35 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,600 to 5,000 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Bouldercreek and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

***Characteristics of Bouldercreek***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Convex

*Aspect (representative):* North

*Aspect (range):* West to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/wild ginger (CN575)

**Typical profile**

A—0 to 2 inches; ashy silt loam

Bw1—2 to 15 inches; silt loam

2Bw2—15 to 26 inches; very gravelly sandy loam

2C—26 to 60 inches; extremely gravelly sandy loam

***Dissimilar Minor Components***

**Flewsie soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Ridges

**Hugus soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

**Marblecreek soils**

*Percentage of map unit:* 5 percent

*Landform:* Steep, convex mountain slopes

**Nakarna soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

***23—Bouldercreek, moist-Brodeer complex, 35 to 70 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,700 to 4,900 feet

*Mean annual precipitation:* 45 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Bouldercreek, moist, and similar soils:* 75 percent

*Brodeer and similar soils:* 15 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Bouldercreek, Moist***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 35 to 70 percent



## Soil Survey of Clearwater Area, Idaho

*Depth to restrictive feature:* 14 to 26 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

Bw1—8 to 21 inches; ashy loam

2Bw2—21 to 27 inches; gravelly loam

2Bw3—27 to 34 inches; very gravelly sandy loam

2BC—34 to 53 inches; very cobbly coarse sandy loam

2C—53 to 69 inches; very gravelly loamy sand

## ***Characteristics of Brodeer***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Mushel soils**

*Percentage of map unit:* 7 percent

*Landform:* Benches on mountain slopes

**Judgetown soils, moist**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of mountain slopes

***24—Bouldercreek-Brodeer complex, 35 to 70 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,800 to 5,200 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Bouldercreek and similar soils:* 65 percent

*Brodeer and similar soils:* 25 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Bouldercreek***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* 14 to 26 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/queencup beadlily (CN530)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

Bw1—8 to 21 inches; ashy loam

2Bw2—21 to 27 inches; gravelly loam

2Bw3—27 to 34 inches; very gravelly sandy loam

2BC—34 to 53 inches; very cobbly coarse sandy loam

2C—53 to 69 inches; very gravelly loamy sand

***Characteristics of Brodeer***

**Setting**

*Landform: Mountain slopes*

*Downslope shape: Convex*

*Across-slope shape: Convex*

*Aspect (representative): Northwest*

*Aspect (range): Southwest to northeast (clockwise)*

**Properties and qualities**

*Parent material: Volcanic ash over colluvium derived from granite and/or gneiss*

*Slope range: 35 to 70 percent*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Well drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: None*

*Ponding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Salinity (maximum): Not saline*

*Sodicity (maximum): Not sodic*

*Available water capacity (entire profile): Very high (about 13.2 inches)*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/wild ginger (CN545)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Marblecreek soils, moist**

*Percentage of map unit: 5 percent*

*Landform: Convex mountain slopes*

**Mushel soils**

*Percentage of map unit: 5 percent*

*Landform: Convex and smooth mountain slopes*

## **25—Bouldercreek-Judgetown complex, 35 to 75 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,500 to 4,200 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Bouldercreek and similar soils:* 55 percent

*Judgetown and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Bouldercreek**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 45 to 75 percent

*Depth to restrictive feature:* 14 to 26 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

Bw1—8 to 21 inches; ashy loam

2Bw2—21 to 27 inches; gravelly loam

2Bw3—27 to 34 inches; very gravelly sandy loam

2BC—34 to 53 inches; very cobbly coarse sandy loam

2C—53 to 69 inches; very gravelly loamy sand

### **Characteristics of Judgetown**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over residuum derived from granite and/or gneiss

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy loam

Bw1—4 to 17 inches; ashy loam

2Bw2—17 to 30 inches; sandy loam

2C—30 to 52 inches; loamy coarse sand

2Cr—52 to 62 inches; weathered bedrock

### ***Dissimilar Minor Components***

#### **Aldermant soils**

*Percentage of map unit:* 11 percent

*Landform:* Convex mountain slopes

#### **Boulder creek soils, moist**

*Percentage of map unit:* 3 percent

*Landform:* Concave mountain slopes

#### **Marble creek soils**

*Percentage of map unit:* 3 percent

*Landform:* Sharp, convex mountain slopes

#### **Mushel soils**

*Percentage of map unit:* 3 percent

*Landform:* Smooth and convex mountain slopes

## **26—Boulder creek-Marble creek association, 35 to 65 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,600 to 5,000 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Bouldercreek, high precipitation, and similar soils:* 50 percent

*Marblecreek and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Bouldercreek, High Precipitation**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Convex

*Aspect (representative):* Southeast

*Aspect (range):* Northeast to south (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/wild ginger (CN575)

#### **Typical profile**

A—0 to 2 inches; ashy silt loam

Bw1—2 to 15 inches; silt loam

2Bw2—15 to 26 inches; very gravelly sandy loam

2C—26 to 60 inches; extremely gravelly sandy loam

### **Characteristics of Marblecreek**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist, quartzite, and/or granite

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline



## Soil Survey of Clearwater Area, Idaho

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; gravelly ashy silt loam

Bw1—5 to 13 inches; gravelly ashy silt loam

2Bw2—13 to 27 inches; very gravelly sandy loam

2BC—27 to 46 inches; extremely gravelly sandy loam

2C—46 to 62 inches; extremely cobbly loamy sand

### ***Dissimilar Minor Components***

#### **Flewsie soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

#### **Nakarna soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

#### **Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

#### **Rubble land**

*Percentage of map unit:* 5 percent

*Landform:* Concave chutes on mountain slopes

## **27—Bouldercreek-Rettig complex, 45 to 90 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,200 to 3,600 feet

*Mean annual precipitation:* 40 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Bouldercreek, cool, dry, and similar soils:* 70 percent

*Rettig, cool, and similar soils:* 25 percent

*Dissimilar minor component:* 5 percent

### ***Characteristics of Bouldercreek, Cool, Dry***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 45 to 90 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Western hemlock/queencup beadlily (CN570)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

Bw1—8 to 21 inches; ashy loam

2Bw2—21 to 27 inches; gravelly loam

2Bw3—27 to 34 inches; very gravelly sandy loam

2BC—34 to 53 inches; very cobbly coarse sandy loam

2C—53 to 69 inches; very gravelly loamy sand

## ***Characteristics of Rettig, Cool***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 45 to 90 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Western hemlock/wild ginger (CN575)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam  
2Bw2—27 to 34 inches; gravelly sandy loam  
2Bw3—34 to 47 inches; gravelly sandy loam  
2BC—47 to 63 inches; gravelly sandy loam  
2C—63 to 66 inches; very gravelly sandy loam

***Dissimilar Minor Component***

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

**28—Brequito ashy silt loam, 25 to 50 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,900 to 3,300 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brequito, dry, and similar soils:* 65 percent

*Dissimilar minor components:* 35 percent

***Characteristics of Brequito, Dry***

**Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss

*Slope range:* 25 to 50 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/queencup beadleily (CN520)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 5 inches; ashy silt loam  
Bw—5 to 11 inches; ashy silt loam  
2B/E—11 to 20 inches; silt loam  
2Bt—20 to 37 inches; silty clay loam  
3BC—37 to 67 inches; loam

***Dissimilar Minor Components***

**Brodeer soils, dry**

*Percentage of map unit:* 12 percent  
*Landform:* Mountain slopes

**Grangemont soils, dry**

*Percentage of map unit:* 12 percent  
*Landform:* Structural benches

**Lado soils, dry**

*Percentage of map unit:* 11 percent  
*Landform:* Concave mountain slopes

**29—Brequito-Grangemont complex, 20 to 45 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,800 to 3,500 feet  
*Mean annual precipitation:* 35 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brequito and similar soils:* 45 percent  
*Grangemont and similar soils:* 40 percent  
*Dissimilar minor components:* 15 percent

***Characteristics of Brequito***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss  
*Slope range:* 20 to 45 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline

## Soil Survey of Clearwater Area, Idaho

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 5 inches; ashy silt loam

Bw—5 to 11 inches; ashy silt loam

2B/E—11 to 20 inches; silt loam

2Bt—20 to 37 inches; silty clay loam

3BC—37 to 67 inches; loam

## ***Characteristics of Grangemont***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 20 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 18.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 14 inches; ashy silt loam

2B/E—14 to 38 inches; silt loam

2Bt—38 to 95 inches; silty clay loam

## ***Dissimilar Minor Components***

### **Kauder soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on broad, low ridges

### **Lado soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Ridges

**Reving soils**

*Percentage of map unit:* 3 percent

*Landform:* Footslopes of ridges

**Mushel soils**

*Percentage of map unit:* 2 percent

*Landform:* Mountain slopes

**30—Brequito-Lado complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,200 to 3,400 feet

*Mean annual precipitation:* 38 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brequito and similar soils:* 45 percent

*Lado, dry, and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Brequito***

**Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 5 inches; ashy silt loam

Bw—5 to 11 inches; ashy silt loam



2B/E—11 to 20 inches; silt loam  
2Bt—20 to 37 inches; silty clay loam  
3BC—37 to 67 inches; loam

### ***Characteristics of Lado, Dry***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or metamorphic rock  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; medial silt loam  
Bw—4 to 20 inches; medial silt loam  
2Bt—20 to 48 inches; clay loam  
3Bt—48 to 64 inches; loam

### ***Dissimilar Minor Components***

#### **Brodeer soils, dry**

*Percentage of map unit:* 9 percent  
*Landform:* Escarpments on mountain slopes

#### **Mushel soils**

*Percentage of map unit:* 7 percent  
*Landform:* Convex mountain slopes

#### **Aquandic Endoaquepts**

*Percentage of map unit:* 2 percent  
*Landform:* Drainageways

#### **Rock outcrop**

*Percentage of map unit:* 2 percent  
*Landform:* Convex areas of mountain slopes

## **31—Brequito-Lado complex, 5 to 15 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,400 to 3,500 feet

*Mean annual precipitation:* 42 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Brequito and similar soils:* 60 percent

*Lado, dry, and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Brequito**

#### **Setting**

*Landform:* Mountain slopes, structural benches

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss

*Slope range:* 5 to 15 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 5 inches; ashy silt loam

Bw—5 to 11 inches; ashy silt loam

2B/E—11 to 20 inches; silt loam

2Bt—20 to 37 inches; silty clay loam

3BC—37 to 67 inches; loam

### **Characteristics of Lado, Dry**

#### **Setting**

*Landform:* Structural benches, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or metamorphic rock

*Slope range:* 5 to 15 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadrilly (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; medial silt loam

Bw—4 to 20 inches; medial silt loam

2Bt—20 to 48 inches; clay loam

3Bt—48 to 64 inches; loam

***Dissimilar Minor Components***

**Mushel soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

**Brodeer soils, dry**

*Percentage of map unit:* 4 percent

*Landform:* Smooth mountain slopes

**Lado soils**

*Percentage of map unit:* 4 percent

*Landform:* Concave mountain slopes

**Marblecreek soils, moist**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**32—Brequito-Mushel complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,100 to 3,300 feet

*Mean annual precipitation:* 38 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Brequito and similar soils:* 50 percent

*Mushel and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Brequito**

#### **Setting**

*Landform:* Structural benches, mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 5 inches; ashy silt loam

Bw—5 to 11 inches; ashy silt loam

2B/E—11 to 20 inches; silt loam

2Bt—20 to 37 inches; silty clay loam

3BC—37 to 67 inches; loam

### **Characteristics of Mushel**

#### **Setting**

*Landform:* Ridges, mountains

*Geomorphic position (two-dimensional):* Shoulders

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 6 inches; ashy silt loam

Bw—6 to 13 inches; ashy silt loam

2BE—13 to 21 inches; loam

2Bt—21 to 39 inches; loam

2BC—39 to 48 inches; loam

2C—48 to 68 inches; sandy loam

***Dissimilar Minor Components***

**Brodeer soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

**Lado soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**33—Brequito-Mushel complex, 35 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,400 to 4,100 feet

*Mean annual precipitation:* 40 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brequito and similar soils:* 50 percent

*Mushel and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Brequito***

**Setting**

*Landform:* Mountain slopes

*Geomorphic position (two-dimensional):* Footslopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss

## Soil Survey of Clearwater Area, Idaho

*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 3 inches; moderately decomposed plant material  
A—3 to 5 inches; ashy silt loam  
Bw—5 to 11 inches; ashy silt loam  
2B/E—11 to 20 inches; silt loam  
2Bt—20 to 37 inches; silty clay loam  
3BC—37 to 67 inches; loam

## ***Characteristics of Mushel***

### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material  
A—3 to 6 inches; ashy silt loam  
Bw—6 to 13 inches; ashy silt loam  
2BE—13 to 21 inches; loam



2Bt—21 to 39 inches; loam  
2BC—39 to 48 inches; loam  
2C—48 to 68 inches; sandy loam

***Dissimilar Minor Components***

**Brodeer soils, dry**

*Percentage of map unit:* 5 percent  
*Landform:* Concave draws on mountain slopes

**Judgetown soils**

*Percentage of map unit:* 5 percent  
*Landform:* Ridges

**Marblecreek soils**

*Percentage of map unit:* 5 percent  
*Landform:* Sharp, convex areas of mountain slopes

**34—Brodeer, dry-Brodeer complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,900 to 4,200 feet  
*Mean annual precipitation:* 35 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brodeer, dry, and similar soils:* 55 percent  
*Brodeer and similar soils:* 40 percent  
*Dissimilar minor components:* 5 percent

***Characteristics of Brodeer, Dry***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

***Characteristics of Brodeer***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Mushel soils**

*Percentage of map unit:* 3 percent

*Landform:* Ridges; sharp, convex mountain slopes

**Judgetown soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex mountain slopes

## **35—Brodeer-Mushel complex, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,200 to 3,500 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Brodeer and similar soils:* 45 percent

*Mushel and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Brodeer**

#### **Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

### **Characteristics of Mushel**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 6 inches; ashy silt loam

Bw—6 to 13 inches; ashy silt loam

2BE—13 to 21 inches; loam

2Bt—21 to 39 inches; loam

2BC—39 to 48 inches; loam

2C—48 to 68 inches; sandy loam

### ***Dissimilar Minor Components***

#### **Dullaxe soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

#### **Brodeer soils**

*Percentage of map unit:* 3 percent

*Landform:* Smooth mountain slopes

#### **Flewsie soils, dry**

*Percentage of map unit:* 2 percent

*Landform:* Smooth mountain slopes

## **36—Brodeer, warm-Mushel, dry complex, 15 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,600 to 4,300 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Brodeer, warm, and similar soils:* 45 percent

*Mushel, dry, and similar soils:* 30 percent

*Dissimilar minor components:* 25 percent

### **Characteristics of Brodeer, Warm**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

### **Characteristics of Mushel, Dry**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

## Soil Survey of Clearwater Area, Idaho

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 6 inches; ashy silt loam

Bw—6 to 13 inches; ashy silt loam

2BE—13 to 21 inches; loam

2Bt—21 to 39 inches; loam

2BC—39 to 48 inches; loam

2C—48 to 68 inches; sandy loam

### ***Dissimilar Minor Components***

#### **Brequito soils, dry**

*Percentage of map unit:* 9 percent

*Landform:* Mountain slopes, ridges

#### **Flewsie soils, low precipitation**

*Percentage of map unit:* 8 percent

*Landform:* Smooth mountain slopes

#### **Brodeer soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes

#### **Campra soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

## **37—Brodeer-Bouldercreek complex, 15 to 40 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 4,200 feet

*Mean annual precipitation:* 45 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Brodeer and similar soils:* 65 percent

*Bouldercreek and similar soils:* 25 percent

*Dissimilar minor components:* 10 percent

### ***Characteristics of Brodeer***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave



## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 15 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.2 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

### Typical profile

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw—4 to 21 inches; ashy silt loam  
2Bt—21 to 59 inches; loam  
2BC—59 to 67 inches; gravelly sandy loam

## Characteristics of Boulder creek

### Setting

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over mixed colluvium  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* 14 to 26 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### Typical profile

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 8 inches; ashy loam

Bw1—8 to 21 inches; ashy loam  
2Bw2—21 to 27 inches; gravelly loam  
2Bw3—27 to 34 inches; very gravelly sandy loam  
2BC—34 to 53 inches; very cobbly coarse sandy loam  
2C—53 to 69 inches; very gravelly loamy sand

***Dissimilar Minor Components***

**Floodwood soils, warm**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes

**Judgetown soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex and smooth mountain slopes

**38—Brodeer-Flewsie complex, 30 to 60 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,800 to 4,800 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brodeer and similar soils:* 50 percent

*Flewsie, dry, and similar soils:* 40 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Brodeer***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 30 to 60 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw—4 to 21 inches; ashy silt loam  
2Bt—21 to 59 inches; loam  
2BC—59 to 67 inches; gravelly sandy loam

***Characteristics of Flewsie, Dry***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or quartzite  
*Slope range:* 30 to 60 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 7 inches; ashy silt loam  
Bw1—7 to 13 inches; ashy silt loam  
Bw2—13 to 16 inches; ashy silt loam  
2Bw3—16 to 23 inches; fine sandy loam  
2Bw4—23 to 31 inches; fine sandy loam  
2BC—31 to 46 inches; fine sandy loam  
2C—46 to 62 inches; loamy fine sand

***Dissimilar Minor Components***

**Boulder creek soils, moist**

*Percentage of map unit:* 4 percent  
*Landform:* Mountain slopes

**Mushel soils**

*Percentage of map unit:* 4 percent  
*Landform:* Ridges, mountain slopes

**Grandad soils, dry**

*Percentage of map unit:* 1 percent  
*Landform:* Mountain slopes

**Judgetown soils**

*Percentage of map unit:* 1 percent

*Landform:* Convex mountain slopes

**39—Brodeer-Lostpete complex, 15 to 45 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,900 to 4,600 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brodeer and similar soils:* 60 percent

*Lostpete and similar soils:* 35 percent

*Dissimilar minor components:* 5 percent

***Characteristics of Brodeer***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 45 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

***Characteristics of Lostpete***

**Setting**

*Landform:* Mountains

*Geomorphic position (two-dimensional):* Footslopes

*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess and/or colluvium derived from granite and/or gneiss  
*Slope range:* 15 to 30 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 5 inches; medial silt loam  
Bw1—5 to 13 inches; medial silt loam  
Bw2—13 to 19 inches; medial silt loam  
2Bt1—19 to 29 inches; silt loam  
2Bt2—29 to 42 inches; silt loam  
2Bt3—42 to 52 inches; silt loam  
2Bt4—52 to 66 inches; silt loam

***Dissimilar Minor Components***

**Mushel soils**

*Percentage of map unit:* 3 percent  
*Landform:* Mountain slopes

**Hugus soils, high precipitation**

*Percentage of map unit:* 2 percent  
*Landform:* Ridges, mountain slopes

***40—Brodeer-Lostpete complex, moist, 15 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,200 to 3,900 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

**Map Unit Composition**

*Brodeer, moist, and similar soils:* 55 percent  
*Lostpete, moist, and similar soils:* 30 percent  
*Dissimilar minor components:* 15 percent

**Characteristics of Brodeer, Moist**

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw—4 to 21 inches; ashy silt loam  
2Bt—21 to 59 inches; loam  
2BC—59 to 67 inches; gravelly sandy loam

**Characteristics of Lostpete, Moist**

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess and/or colluvium derived from granite and/or gneiss  
*Slope range:* 15 to 30 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches



*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/oakfern (CN555)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; medial silt loam

Bw1—5 to 13 inches; medial silt loam

Bw2—13 to 19 inches; medial silt loam

2Bt1—19 to 29 inches; silt loam

2Bt2—29 to 42 inches; silt loam

2Bt3—42 to 52 inches; silt loam

2Bt4—52 to 66 inches; silt loam

***Dissimilar Minor Components***

**Judgetown soils, cool**

*Percentage of map unit:* 10 percent

*Landform:* Convex mountain slopes

**Brequito soils, moist**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

**Dullaxe soils, dry**

*Percentage of map unit:* 1 percent

*Landform:* Convex mountain slopes

**Grandad soils**

*Percentage of map unit:* 1 percent

*Landform:* Ridges

**41—Brodeer, dry-Mushel complex, 35 to 60 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,900 to 4,250 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brodeer, dry, and similar soils:* 50 percent

*Mushel and similar soils:* 40 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Brodeer, Dry***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 35 to 60 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.2 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### Typical profile

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw—4 to 21 inches; ashy silt loam  
2Bt—21 to 59 inches; loam  
2BC—59 to 67 inches; gravelly sandy loam

## Characteristics of Mushel

### Setting

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock  
*Slope range:* 35 to 60 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.3 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### Typical profile

Oi—0 to 3 inches; slightly decomposed plant material  
A—3 to 6 inches; ashy silt loam

Bw—6 to 13 inches; ashy silt loam  
2BE—13 to 21 inches; loam  
2Bt—21 to 39 inches; loam  
2BC—39 to 48 inches; loam  
2C—48 to 68 inches; sandy loam

***Dissimilar Minor Components***

**Brequito soils**

*Percentage of map unit:* 5 percent  
*Landform:* Benches on mountain slopes

**Judgetown soils, dry**

*Percentage of map unit:* 2 percent  
*Landform:* Convex mountain slopes

**Lostpete soils, dry**

*Percentage of map unit:* 1 percent  
*Landform:* Smooth mountain slopes

**Marblecreek soils**

*Percentage of map unit:* 1 percent  
*Landform:* Steep, convex mountain slopes

**Poorman soils**

*Percentage of map unit:* 1 percent  
*Landform:* Mountain slopes

***42—Brodeer-Mushel complex, 35 to 75 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,200 to 4,000 feet  
*Mean annual precipitation:* 38 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Brodeer and similar soils:* 60 percent  
*Mushel and similar soils:* 35 percent  
*Dissimilar minor component:* 5 percent

***Characteristics of Brodeer***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

## ***Characteristics of Mushel***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 6 inches; ashy silt loam

Bw—6 to 13 inches; ashy silt loam

2BE—13 to 21 inches; loam

2Bt—21 to 39 inches; loam

2BC—39 to 48 inches; loam

2C—48 to 68 inches; sandy loam

***Dissimilar Minor Component***

**Bouldercreek soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**43—Burntcreek ashy loam, 0 to 3 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,350 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Burntcreek and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Burntcreek***

**Setting**

*Landform:* Drainageways, flood plains

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 7 to 19 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Ap1—0 to 7 inches; ashy loam

Ap2—7 to 11 inches; loam

Bw1—11 to 28 inches; loam

Bw2—28 to 36 inches; loam

C—36 to 60 inches; stratified silt loam to very gravelly loam

***Dissimilar Minor Components***

**Caseycreek soils, wet**

*Percentage of map unit:* 9 percent

*Landform:* High stream terraces

**Lewhand soils**

*Percentage of map unit:* 6 percent

*Landform:* Concave middle stream terraces

**Aquandic Endoaquepts**

*Percentage of map unit:* 3 percent

*Landform:* Concave drainageways

**Hildebrand soils**

*Percentage of map unit:* 2 percent

*Landform:* Stream terraces

**44—Campra gravelly ashy silt loam, 40 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,200 to 3,000 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Campra and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Campra***

**Setting**

*Landform:* Hillslopes, canyons

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and loess over colluvium derived from basalt

*Slope range:* 40 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Grand fir/queencup beadlily (CN520)



**Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 7 inches; gravelly ashy silt loam

AB—7 to 14 inches; very gravelly ashy silt loam

E/B—14 to 20 inches; very gravelly silt loam

B/E—20 to 67 inches; extremely gravelly silt loam

***Dissimilar Minor Components***

**Rock outcrop**

*Percentage of map unit:* 7 percent

*Landform:* Convex areas on side slopes of canyons

**Kettenbach soils**

*Percentage of map unit:* 5 percent

*Landform:* Canyons

**Agatha soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex side slopes of canyons

**Sly soils**

*Percentage of map unit:* 3 percent

*Landform:* Benches in canyons

**Klickson soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex side slopes of canyons

**45—Campra-Sly complex, 10 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,900 to 2,800 feet

*Mean annual precipitation:* 30 to 35 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Campra and similar soils:* 45 percent

*Sly and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Campra***

**Setting**

*Landform:* Hillslopes, canyons

*Geomorphic position (three-dimensional):* Side slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and loess over colluvium derived from basalt

*Slope range:* 10 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material  
A—3 to 7 inches; gravelly ashy silt loam  
AB—7 to 14 inches; very gravelly ashy silt loam  
E/B—14 to 20 inches; very gravelly silt loam  
B/E—20 to 67 inches; extremely gravelly silt loam

## ***Characteristics of Sly***

### **Setting**

*Landform:* Hillslopes, structural benches  
*Downslope shape:* Concave  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt  
*Slope range:* 10 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 4 inches; slightly decomposed plant material  
A—4 to 8 inches; ashy silt loam  
Bw—8 to 19 inches; ashy silt loam  
Bt1—19 to 28 inches; silty clay loam  
Bt2—28 to 37 inches; silty clay loam  
C—37 to 66 inches; cobbly clay loam

## ***Dissimilar Minor Components***

### **Agatha soils**

*Percentage of map unit:* 9 percent  
*Landform:* Side slopes of canyons

**Seddow soils**

*Percentage of map unit:* 3 percent

*Landform:* Hillslopes on plateaus

**Reggear soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills on plateaus

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas on side slopes of canyons

**46—Carlinton ashy silt loam, 20 to 30 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 3,000 feet

*Mean annual precipitation:* 26 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Carlinton and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Carlinton***

**Setting**

*Landform:* Interfluves on hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or reworked loess

*Slope range:* 20 to 30 percent

*Depth to restrictive feature:* 22 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 7 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 11 inches; ashy silt loam

Bw—11 to 22 inches; silt loam

B/E—22 to 35 inches; silt loam

Btxb—35 to 62 inches; silty clay loam

***Dissimilar Minor Components***

**Kruse soils**

*Percentage of map unit:* 10 percent

*Landform:* Ridges, mountain slopes

**Setters soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Plateaus

**Reggear soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex hills on plateaus

**Agatha soils**

*Percentage of map unit:* 2 percent

*Landform:* Side slopes of canyons

***47—Carlinton ashy silt loam, 3 to 20 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,200 to 3,300 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Carlinton and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Carlinton***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or reworked loess

*Slope range:* 3 to 20 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 7 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 11 inches; ashy silt loam

Bw—11 to 22 inches; silt loam

B/E—22 to 35 inches; silt loam

Btxb—35 to 62 inches; silty clay loam

***Dissimilar Minor Components***

**Sly soils**

*Percentage of map unit:* 5 percent

*Landform:* Structural benches

**Taney soils**

*Percentage of map unit:* 5 percent

*Landform:* Ridges

**Agatha soils**

*Percentage of map unit:* 3 percent

*Landform:* Side slopes of canyons

**Lebaron soils**

*Percentage of map unit:* 2 percent

*Landform:* Drainageways on benches, flood plains

**48—Carlinton-Kruse complex, 5 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,800 feet

*Mean annual precipitation:* 25 to 29 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Carlinton and similar soils:* 50 percent

*Kruse and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Carlinton***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or reworked loess

*Slope range:* 5 to 20 percent

## Soil Survey of Clearwater Area, Idaho

*Depth to restrictive feature:* 20 to 40 inches to a fragipan  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* About 4 to 7 inches (see Water Features table)  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Grand fir/ninebark (CN506)

### Typical profile

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 11 inches; ashy silt loam  
Bw—11 to 22 inches; silt loam  
B/E—22 to 35 inches; silt loam  
Btxb—35 to 62 inches; silty clay loam

## Characteristics of Kruse

### Setting

*Landform:* Ridges, mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash and/or loess over mixed colluvium  
*Slope range:* 5 to 20 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.2 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Grand fir/ninebark (CN506)

### Typical profile

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 6 inches; ashy loam  
BA—6 to 14 inches; ashy loam  
Bt—14 to 41 inches; clay loam  
2BC—41 to 48 inches; sandy loam  
2C—48 to 61 inches; loamy sand



***Dissimilar Minor Components***

**Teakean soils**

*Percentage of map unit:* 5 percent

*Landform:* Ridges

**Uvi soils**

*Percentage of map unit:* 5 percent

*Landform:* Dissected mountain slopes

**Wilkins soils**

*Percentage of map unit:* 5 percent

*Landform:* Swales

***49—Carlinton-Seddow complex, 3 to 15 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,200 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Carlinton and similar soils:* 55 percent

*Seddow and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Carlinton***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Loess and/or reworked loess

*Slope range:* 3 to 15 percent

*Depth to restrictive feature:* 22 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 7 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 11 inches; ashy silt loam

Bw—11 to 22 inches; silt loam

B/E—22 to 35 inches; silt loam

Btxb—35 to 62 inches; silty clay loam

***Characteristics of Seddow***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash and loess and/or colluvium derived from basalt

*Slope range:* 3 to 15 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Grand fir/twinflower (CN590)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 5 inches; ashy silt loam

2Bt1—5 to 13 inches; ashy silt loam

2Bt2—13 to 35 inches; silt loam

3Bt3—35 to 44 inches; very gravelly silt loam

3R—44 to 54 inches; unweathered bedrock

***Dissimilar Minor Components***

**Klickson soils**

*Percentage of map unit:* 5 percent

*Landform:* Escarpments in canyons

**Latahco soils**

*Percentage of map unit:* 5 percent

*Landform:* Flood plains, drainageways

**50—Caseycreek ashy silt loam, 2 to 15 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,700 to 3,300 feet

*Mean annual precipitation:* 32 to 40 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Caseycreek and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Caseycreek**

#### **Setting**

*Landform:* Terraces

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Volcanic ash and alluvium

*Slope range:* 2 to 15 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 15 to 35 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.7 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; ashy silt loam

AB—4 to 7 inches; ashy loam

Bw1—7 to 16 inches; loam

Bw2—16 to 22 inches; loam

C1—22 to 48 inches; sandy loam

C2—48 to 66 inches; coarse sand

### **Dissimilar Minor Components**

#### **Aquandic Endoaquepts**

*Percentage of map unit:* 10 percent

*Landform:* Drainageways

#### **Aquandic Dystrudepts**

*Percentage of map unit:* 8 percent

*Landform:* Drainageways

#### **Reggear soils, moist**

*Percentage of map unit:* 1 percent

*Landform:* Mountain slopes on plateaus

#### **Teneb soils**

*Percentage of map unit:* 1 percent

*Landform:* Drainageways

## **51—Cavendish silt loam, 2 to 8 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,600 to 3,500 feet

*Mean annual precipitation:* 25 to 33 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### ***Map Unit Composition***

*Cavendish and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

### ***Characteristics of Cavendish***

#### **Setting**

*Landform:* Ridges, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Loess over residuum derived from basalt

*Slope range:* 2 to 8 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Douglas-fir/common snowberry (CN310)

#### **Typical profile**

Ap—0 to 8 inches; silt loam

Bt—8 to 30 inches; silty clay loam

2Bt—30 to 43 inches; gravelly clay loam

2Cr—43 to 53 inches; weathered bedrock

### ***Dissimilar Minor Components***

#### **Kooskia soils**

*Percentage of map unit:* 10 percent

*Landform:* Drainageways

#### **Lebaron soils**

*Percentage of map unit:* 5 percent

*Landform:* Flood plains

#### **Setters soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex slopes of benches

**Taney soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave areas of plateaus

**52—Cavendish-Taney complex, 8 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 3,300 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Cavendish and similar soils:* 45 percent

*Taney and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Cavendish***

**Setting**

*Landform:* Ridges, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess over residuum derived from basalt

*Slope range:* 8 to 20 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/common snowberry (CN310)

**Typical profile**

Ap—0 to 8 inches; silt loam

Bt—8 to 30 inches; silty clay loam

2Bt—30 to 43 inches; gravelly clay loam

2Cr—43 to 53 inches; weathered bedrock

***Characteristics of Taney***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Convex

*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess  
*Slope range:* 8 to 20 percent  
*Depth to restrictive feature:* 20 to 40 inches to a fragipan  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* About 16 to 37 inches (see Water Features table)  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Douglas-fir/common snowberry (CN310)

**Typical profile**

A—0 to 10 inches; ashy silt loam  
Bw—10 to 31 inches; silt loam  
Btxb—31 to 60 inches; silty clay loam

***Dissimilar Minor Components***

**Wilkins soils**

*Percentage of map unit:* 5 percent  
*Landform:* Swales

**Klickson soils**

*Percentage of map unit:* 4 percent  
*Landform:* Canyons

**Joel soils**

*Percentage of map unit:* 3 percent  
*Landform:* Hills on plateaus

**Setters soils**

*Percentage of map unit:* 3 percent  
*Landform:* Benches on hillslopes

***53—Cobbler-Aldermant complex, 35 to 75 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 3,000 feet  
*Mean annual precipitation:* 30 to 40 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days



### **Map Unit Composition**

*Cobbler and similar soils:* 55 percent

*Aldermand and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Cobbler**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from metamorphic rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

#### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

Oe—3 to 4 inches; moderately decomposed plant material

A—4 to 7 inches; ashy loam

AB—7 to 16 inches; ashy loam

Bw1—16 to 26 inches; gravelly sandy loam

Bw2—26 to 50 inches; coarse sandy loam

C1—50 to 59 inches; sandy loam

C2—59 to 68 inches; loamy sand

### **Characteristics of Aldermand**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or alluvium derived from granite and/or metamorphic rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 20 to 55 inches to strongly contrasting textural stratification

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 7 inches; ashy loam  
Bw1—7 to 17 inches; ashy loam  
2Bw2—17 to 25 inches; sandy loam  
2BC—25 to 33 inches; sandy loam  
2C1—33 to 44 inches; gravelly sandy loam  
2C2—44 to 62 inches; very stony loamy sand

### ***Dissimilar Minor Components***

#### **Rock outcrop**

*Percentage of map unit:* 5 percent  
*Landform:* Convex areas of mountain slopes

#### **Uvi soils**

*Percentage of map unit:* 5 percent  
*Landform:* Smooth mountain slopes

## **54—Cobbler-Noil complex, 45 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 3,000 feet  
*Mean annual precipitation:* 25 to 40 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

### ***Map Unit Composition***

*Cobbler and similar soils:* 50 percent  
*Noil and similar soils:* 45 percent  
*Dissimilar minor components:* 5 percent

### ***Characteristics of Cobbler***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from metamorphic rock  
*Slope range:* 45 to 75 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e  
*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material  
Oe—3 to 4 inches; moderately decomposed plant material  
A—4 to 7 inches; ashy loam  
AB—7 to 16 inches; ashy loam  
Bw1—16 to 26 inches; gravelly sandy loam  
Bw2—26 to 50 inches; coarse sandy loam  
C1—50 to 59 inches; sandy loam  
C2—59 to 68 inches; loamy sand

***Characteristics of Noil***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to west (clockwise)

**Properties and qualities**

*Parent material:* Loess and volcanic ash over colluvium over residuum derived from metamorphic rock  
*Slope range:* 45 to 75 percent  
*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Low (about 4.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e  
*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 9 inches; ashy loam

Bw1—9 to 19 inches; very gravelly sandy loam  
Bw2—19 to 29 inches; extremely gravelly sandy loam  
C—29 to 43 inches; extremely gravelly sandy loam  
Cr—43 to 53 inches; weathered bedrock

***Dissimilar Minor Components***

**Keeler soils, dry**

*Percentage of map unit:* 3 percent  
*Landform:* Concave mountain slopes

**Rock outcrop**

*Percentage of map unit:* 2 percent  
*Landform:* Convex areas of mountain slopes

**55—Cranberry-Riswold complex, 20 to 45 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,800 to 3,400 feet  
*Mean annual precipitation:* 35 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Cranberry and similar soils:* 60 percent  
*Riswold and similar soils:* 20 percent  
*Dissimilar minor components:* 20 percent

***Characteristics of Cranberry***

**Setting**

*Landform:* Hillslopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt  
*Slope range:* 20 to 45 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 5 inches; ashy silt loam  
Bw1—5 to 11 inches; ashy silt loam  
Bw2—11 to 16 inches; ashy silt loam  
2Bt1—16 to 22 inches; silt loam  
2Bt2—22 to 32 inches; silt loam  
2Bt3—32 to 40 inches; silty clay loam  
2Bt4—40 to 50 inches; silty clay loam  
3Btb1—50 to 57 inches; clay loam  
3Btb2—57 to 62 inches; clay loam

***Characteristics of Riswold***

**Setting**

*Landform:* Escarpments, hillslopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt  
*Slope range:* 20 to 45 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 9 inches; ashy silt loam  
Bw—9 to 17 inches; ashy silt loam  
2E/B—17 to 27 inches; silt loam  
2B/E—27 to 44 inches; silt loam  
3Bt1—44 to 60 inches; cobbly silty clay loam  
3Bt2—60 to 72 inches; very cobbly silty clay loam

***Dissimilar Minor Components***

**Elkridge soils**

*Percentage of map unit:* 10 percent  
*Landform:* Convex hillslopes

**Grangemont soils**

*Percentage of map unit:* 10 percent  
*Landform:* Smooth hillslopes

## **56—Crumarine silt loam, 0 to 3 percent slopes**

### **Map Unit Setting**

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,100 to 3,100 feet

*Mean annual precipitation:* 23 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Crumarine and similar soils:* 95 percent

*Dissimilar minor components:* 5 percent

### **Characteristics of Crumarine**

#### **Setting**

*Landform:* Narrow flood plains

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Rare (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 6 to 24 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3w

*Ecological site:* DRY MEADOW (R009XY019ID)

#### **Typical profile**

A—0 to 3 inches; silt loam

Bw—3 to 13 inches; loam

C1—13 to 44 inches; sandy loam

C2—44 to 60 inches; gravelly sand

### **Dissimilar Minor Components**

#### **Lebaron soils**

*Percentage of map unit:* 3 percent

*Landform:* Wide flood plains

#### **Aquandic Endoaquepts**

*Percentage of map unit:* 2 percent

*Landform:* Drainageways



## **57—Dam**

*Map unit Percentage of map unit:* Dam—100 percent

*Description of unit:* Dworshak Dam administered by U.S. Army Corps of Engineers

## **58—Driscoll silt loam, 3 to 12 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,100 to 3,200 feet

*Mean annual precipitation:* 24 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### ***Map Unit Composition***

*Driscoll and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### ***Characteristics of Driscoll***

#### **Setting**

*Landform:* Structural benches, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 3 to 12 percent

*Depth to restrictive feature:* 8 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 10 to 34 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

#### **Typical profile**

A—0 to 13 inches; silt loam

Bt—13 to 20 inches; silty clay loam

E—20 to 24 inches; silt loam

2Btb—24 to 54 inches; silty clay

2Btkb—54 to 70 inches; silty clay

***Dissimilar Minor Components***

**Southwick soils**

*Percentage of map unit:* 10 percent

*Landform:* Hills on plateaus

**Wilkins soils**

*Percentage of map unit:* 5 percent

*Landform:* Swales

**59—Driscoll-Larkin complex, 12 to 25 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,700 to 3,200 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Driscoll and similar soils:* 45 percent

*Larkin and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Driscoll***

**Setting**

*Landform:* Hillslopes, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 12 to 25 percent

*Depth to restrictive feature:* 8 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 10 to 34 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

A—0 to 13 inches; silt loam

Bt—13 to 20 inches; silty clay loam

E—20 to 24 inches; silt loam

2Btb—24 to 54 inches; silty clay

2Btkb—54 to 70 inches; silty clay

### ***Characteristics of Larkin***

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Convex

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from basalt

*Slope range:* 12 to 25 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 21 inches; silt loam

Bt—21 to 62 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Jacket soils**

*Percentage of map unit:* 14 percent

*Landform:* Concave hillslopes on plateaus

#### **Cavendish soils**

*Percentage of map unit:* 2 percent

*Landform:* Ridges on plateaus

#### **Kettenbach soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex side slopes of canyons

#### **Southwick soils**

*Percentage of map unit:* 2 percent

*Landform:* Benches on hills

## ***60—Dullaxe, high elevation-Dullaxe association, 30 to 60 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,500 to 4,000 feet

*Mean annual precipitation:* 35 to 45 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Dullaxe, high elevation, and similar soils:* 45 percent

*Dullaxe and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Dullaxe, High Elevation**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 30 to 60 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/wild ginger (CN516)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam

2Bw2—19 to 27 inches; loam

2Bw3—27 to 38 inches; sandy loam

2BC—38 to 46 inches; sandy loam

2C—46 to 66 inches; loamy sand

### **Characteristics of Dullaxe**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 30 to 60 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

## Soil Survey of Clearwater Area, Idaho

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam

2Bw2—19 to 27 inches; loam

2Bw3—27 to 38 inches; sandy loam

2BC—38 to 46 inches; sandy loam

2C—46 to 66 inches; loamy sand

### ***Dissimilar Minor Components***

#### **Aldermant soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

#### **Boulder creek soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

#### **Rettig soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

## **61—Dullaxe, dry-Dullaxe, wet complex, 35 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,800 to 5,000 feet

*Mean annual precipitation:* 45 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Dullaxe, dry, and similar soils:* 60 percent

*Dullaxe, wet, and similar soils:* 35 percent

*Dissimilar minor components:* 5 percent

### ***Characteristics of Dullaxe, Dry***

#### **Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Convex

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam

2Bw2—19 to 27 inches; loam

2Bw3—27 to 38 inches; sandy loam

2BC—38 to 46 inches; sandy loam

2C—46 to 66 inches; loamy sand

## ***Characteristics of Dullaxe, Wet***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/maidenhair fern (CN560)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam



2Bw2—19 to 27 inches; loam  
2Bw3—27 to 38 inches; sandy loam  
2BC—38 to 46 inches; sandy loam  
2C—46 to 66 inches; loamy sand

***Dissimilar Minor Components***

**Boulder creek soils**

*Percentage of map unit:* 3 percent  
*Landform:* Convex areas of mountain slopes

**Elkberry soils, wet**

*Percentage of map unit:* 2 percent  
*Landform:* Benches on mountain slopes

**62—Dullaxe-Brodeer complex, 10 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,000 to 5,000 feet  
*Mean annual precipitation:* 45 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Dullaxe and similar soils:* 50 percent  
*Brodeer and similar soils:* 35 percent  
*Dissimilar minor components:* 15 percent

***Characteristics of Dullaxe***

**Setting**

*Landform:* Mountain slopes, ridges  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 10 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 7 inches; ashy loam  
Bw1—7 to 19 inches; ashy loam  
2Bw2—19 to 27 inches; loam  
2Bw3—27 to 38 inches; sandy loam  
2BC—38 to 46 inches; sandy loam  
2C—46 to 66 inches; loamy sand

***Characteristics of Brodeer***

**Setting**

*Landform:* Mountain slopes, ridges  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 10 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw—4 to 21 inches; ashy silt loam  
2Bt—21 to 59 inches; loam  
2BC—59 to 67 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Judgetown soils, moist**

*Percentage of map unit:* 10 percent  
*Landform:* Mountain slopes

**Bouldercreek soils, moist**

*Percentage of map unit:* 3 percent  
*Landform:* Steep, convex mountain slopes

**Rock outcrop**

*Percentage of map unit:* 1 percent  
*Landform:* Convex areas of mountain slopes

**Weitas soils**

*Percentage of map unit:* 1 percent  
*Landform:* Drainageways on mountain slopes

## **63—Dullaxe-Brodeer complex, 40 to 70 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 4,200 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Dullaxe and similar soils:* 60 percent

*Brodeer and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Dullaxe**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 40 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam

2Bw2—19 to 27 inches; loam

2Bw3—27 to 38 inches; sandy loam

2BC—38 to 46 inches; sandy loam

2C—46 to 66 inches; loamy sand

### **Characteristics of Brodeer**

#### **Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 40 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 21 inches; ashy silt loam

2Bt—21 to 59 inches; loam

2BC—59 to 67 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Elkberry soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex benches

**Grandad soils**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes

**Lostpete soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches on mountain slopes, broad ridges

**64—Dullaxe-Judgetown complex, 35 to 70 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 4,500 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Dullaxe and similar soils:* 60 percent

*Judgetown and similar soils:* 35 percent

*Dissimilar minor components:* 5 percent

***Characteristics of Dullaxe***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 35 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 7 inches; ashy loam  
Bw1—7 to 19 inches; ashy loam  
2Bw2—19 to 27 inches; loam  
2Bw3—27 to 38 inches; sandy loam  
2BC—38 to 46 inches; sandy loam  
2C—46 to 66 inches; loamy sand

## **Characteristics of Judgetown**

### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over residuum derived from granite and/or gneiss  
*Slope range:* 35 to 70 percent  
*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy loam  
Bw1—4 to 17 inches; ashy loam  
2Bw2—17 to 30 inches; sandy loam  
2C—30 to 52 inches; loamy coarse sand  
2Cr—52 to 62 inches; weathered bedrock

***Dissimilar Minor Components***

**Boulder creek soils**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**65—Dullaxe-Judgetown, moist complex, 35 to 55 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,700 to 5,000 feet

*Mean annual precipitation:* 45 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Dullaxe and similar soils:* 70 percent

*Judgetown, moist, and similar soils:* 25 percent

*Dissimilar minor components:* 5 percent

***Characteristics of Dullaxe***

**Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 55 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches



## Soil Survey of Clearwater Area, Idaho

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam

2Bw2—19 to 27 inches; loam

2Bw3—27 to 38 inches; sandy loam

2BC—38 to 46 inches; sandy loam

2C—46 to 66 inches; loamy sand

## ***Characteristics of Judgetown, Moist***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over residuum derived from granite and/or gneiss

*Slope range:* 35 to 55 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy loam

Bw1—4 to 17 inches; ashy loam

2Bw2—17 to 30 inches; sandy loam

2C—30 to 52 inches; loamy coarse sand

2Cr—52 to 62 inches; weathered bedrock

## ***Dissimilar Minor Components***

### **Rock outcrop**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of mountain slopes

**Jury soils**

*Percentage of map unit:* 2 percent

*Landform:* Smooth mountain slopes

**66—Dullaxe-Jury complex, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 4,700 feet

*Mean annual precipitation:* 45 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Dullaxe and similar soils:* 55 percent

*Jury, moist, and similar soils:* 30 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Dullaxe***

**Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam

2Bw2—19 to 27 inches; loam

2Bw3—27 to 38 inches; sandy loam

2BC—38 to 46 inches; sandy loam

2C—46 to 66 inches; loamy sand

***Characteristics of Jury, Moist***

**Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/oakfern (CN555)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 29 inches; medial silt loam

2Bw2—29 to 48 inches; sandy loam

2C—48 to 62 inches; loamy sand

***Dissimilar Minor Components***

**Judgetown soils**

*Percentage of map unit:* 10 percent

*Landform:* Sharp, convex mountain slopes

**Bouldercreek soils, wet**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

***67—Dumps, wood slash***

*Map unit Percentage of map unit:* Dumps, wood slash—100 percent

*Description of areas:* Log yards (resent and old) and associated debris, commonly mixed with rock

***68—Dworshak ashy silt loam, 35 to 50 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,000 feet

## Soil Survey of Clearwater Area, Idaho

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Dworshak and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Dworshak**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 35 to 50 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 11 inches; ashy silt loam

Bw—11 to 18 inches; ashy silt loam

2E/Bt—18 to 31 inches; silt loam

3Bt—31 to 63 inches; very gravelly clay loam

### **Dissimilar Minor Components**

#### **Hugus soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

#### **Teakean soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

## **69—Dworshak-Brequito complex, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 1,600 to 4,100 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Dworshak and similar soils:* 80 percent

*Brequito and similar soils:* 15 percent

*Dissimilar minor component:* 5 percent

### **Characteristics of Dworshak**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 11 inches; ashy silt loam

Bw—11 to 18 inches; ashy silt loam

2E/Bt—18 to 31 inches; silt loam

3Bt—31 to 63 inches; very gravelly clay loam

### **Characteristics of Brequito**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 3 inches; moderately decomposed plant material  
A—3 to 5 inches; ashy silt loam  
Bw—5 to 11 inches; ashy silt loam  
2B/E—11 to 20 inches; silt loam  
2Bt—20 to 37 inches; silty clay loam  
3BC—37 to 67 inches; loam

### ***Dissimilar Minor Component***

### **Kauder soils**

*Percentage of map unit:* 5 percent  
*Landform:* Convex to smooth areas of broad ridges

## **70—Elkberry-Elkberry, wet complex, 15 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,100 to 3,800 feet  
*Mean annual precipitation:* 35 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Elkberry and similar soils:* 45 percent  
*Elkberry, wet, and similar soils:* 30 percent  
*Dissimilar minor components:* 25 percent

### ***Characteristics of Elkberry***

#### **Setting**

*Landform:* Ridges, structural benches  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over silty alluvium and/or reworked loess  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches



## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 15.2 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadrill (CN530)

### Typical profile

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 3 inches; medial silt loam  
Bw—3 to 16 inches; medial silt loam  
2EB—16 to 19 inches; silt loam  
2E/B—19 to 25 inches; silt loam  
2B/E—25 to 36 inches; silt loam  
2Bt1—36 to 45 inches; silty clay loam  
2Bt2—45 to 55 inches; silty clay loam  
3Bt3—55 to 65 inches; loam

## Characteristics of Elkberry, Wet

### Setting

*Landform:* Ridges, structural benches  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over silty alluvium and/or reworked loess  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 15.2 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

### Typical profile

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 3 inches; medial silt loam  
Bw—3 to 16 inches; medial silt loam  
2EB—16 to 19 inches; silt loam  
2E/B—19 to 25 inches; silt loam  
2B/E—25 to 36 inches; silt loam  
2Bt1—36 to 45 inches; silty clay loam

2Bt2—45 to 55 inches; silty clay loam

3Bt3—55 to 65 inches; loam

***Dissimilar Minor Components***

**Grandad soils**

*Percentage of map unit:* 10 percent

*Landform:* Concave mountain slopes

**Poorman soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

**Scand soils**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes

**Township soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex knobs on mountain slopes

***71—Elkberry-Dworshak complex, 15 to 40 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,900 to 4,100 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Elkberry and similar soils:* 45 percent

*Dworshak and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Elkberry***

**Setting**

*Landform:* Structural benches

*Geomorphic position (two-dimensional):* Footslopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over silty alluvium and/or reworked loess

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 15.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 3 inches; medial silt loam

Bw—3 to 16 inches; medial silt loam

2EB—16 to 19 inches; silt loam

2E/B—19 to 25 inches; silt loam

2B/E—25 to 36 inches; silt loam

2Bt1—36 to 45 inches; silty clay loam

2Bt2—45 to 55 inches; silty clay loam

3Bt3—55 to 65 inches; loam

***Characteristics of Dworshak***

**Setting**

*Landform:* Ridges

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 11 inches; ashy silt loam

Bw—11 to 18 inches; ashy silt loam

2E/Bt—18 to 31 inches; silt loam

3Bt—31 to 63 inches; very gravelly clay loam

***Dissimilar Minor Components***

**Shattuck soils**

*Percentage of map unit:* 12 percent

*Landform:* Convex mountain slopes

**Grandad soils**

*Percentage of map unit:* 3 percent

*Landform:* Smooth mountain slopes

## **72—Elkridge-Riswold complex, 20 to 40 percent slopes**

### **Map Unit Setting**

*General landscape:* Canyonlands, plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,500 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Elkridge and similar soils:* 55 percent

*Riswold and similar soils:* 40 percent

*Dissimilar minor components:* 5 percent

### **Characteristics of Elkridge**

#### **Setting**

*Landform:* Hillslopes, canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium and/or residuum derived from basalt

*Slope range:* 20 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.4 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; ashy silt loam

Bw—6 to 13 inches; ashy silt loam

2Bt1—13 to 41 inches; very gravelly silt loam

2Bt2—41 to 62 inches; extremely gravelly silt loam

### **Characteristics of Riswold**

#### **Setting**

*Landform:* Hillslopes, canyons

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 20 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadrill (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; ashy silt loam

Bw—9 to 17 inches; ashy silt loam

2E/B—17 to 27 inches; silt loam

2B/E—27 to 44 inches; silt loam

3Bt1—44 to 60 inches; cobbly silty clay loam

3Bt2—60 to 72 inches; very cobbly silty clay loam

***Dissimilar Minor Components***

**Grangemont soils**

*Percentage of map unit:* 3 percent

*Landform:* Structural benches

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas on side slopes of canyons

***73—Elkridge-Riswold complex, 40 to 70 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands, plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,500 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Elkridge and similar soils:* 65 percent

*Riswold and similar soils:* 30 percent

*Dissimilar minor component:* 5 percent

***Characteristics of Elkridge***

**Setting**

*Landform:* Hillslopes, canyons

*Downslope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium and/or residuum derived from basalt  
*Slope range:* 40 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.4 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlelily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 6 inches; ashy silt loam  
Bw—6 to 13 inches; ashy silt loam  
2Bt1—13 to 41 inches; very gravelly silt loam  
2Bt2—41 to 62 inches; extremely gravelly silt loam

## ***Characteristics of Riswold***

### **Setting**

*Landform:* Hillslopes, canyons  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt  
*Slope range:* 40 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.4 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlelily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 9 inches; ashy silt loam



Bw—9 to 17 inches; ashy silt loam  
2E/B—17 to 27 inches; silt loam  
2B/E—27 to 44 inches; silt loam  
3Bt1—44 to 60 inches; cobbly silty clay loam  
3Bt2—60 to 72 inches; very cobbly silty clay loam

***Dissimilar Minor Component***

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes of canyons

***74—Fico-Hucberit complex, 40 to 70 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,300 to 5,700 feet

*Mean annual precipitation:* 45 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

***Map Unit Composition***

*Fico, dry, and similar soils:* 55 percent

*Hucberit, warm, and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Fico, Dry***

**Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over residuum derived from granite and/or gneiss

*Slope range:* 40 to 70 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Subalpine fir/beargrass (CN690)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 8 inches; medial loam  
Bw1—8 to 17 inches; medial loam  
2Bw2—17 to 25 inches; gravelly sandy loam  
2C—25 to 56 inches; gravelly loamy coarse sand  
2Cr—56 to 66 inches; weathered bedrock

### ***Characteristics of Hucberit, Warm***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or schist  
*Slope range:* 40 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Subalpine fir/beargrass (CN690)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 6 inches; medial silt loam  
Bw1—6 to 14 inches; medial silt loam  
Bw2—14 to 21 inches; medial silt loam  
2Bw3—21 to 28 inches; gravelly loam  
2Bw4—28 to 36 inches; gravelly sandy loam  
2BC—36 to 48 inches; gravelly sandy loam  
3C—48 to 62 inches; loamy coarse sand

### ***Dissimilar Minor Components***

#### **Fico soils**

*Percentage of map unit:* 5 percent  
*Landform:* Concave mountain slopes

#### **Weitas soils**

*Percentage of map unit:* 5 percent  
*Landform:* Concave mountain slopes

## ***75—Fico-Weitas complex, 20 to 40 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 4,500 to 5,300 feet  
*Mean annual precipitation:* 45 to 55 inches  
*Mean annual air temperature:* 38 to 41 degrees F  
*Frost-free period:* 30 to 100 days

### **Map Unit Composition**

*Fico and similar soils:* 50 percent  
*Weitas and similar soils:* 40 percent  
*Dissimilar minor components:* 10 percent

### **Characteristics of Fico**

#### **Setting**

*Landform:* Mountain slopes, ridges  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over residuum derived from granite and/or gneiss  
*Slope range:* 20 to 40 percent  
*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.4 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Subalpine fir/twistedstalk-menziesia phase (CN636)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 3 inches; moderately decomposed plant material  
A—3 to 8 inches; medial loam  
Bw1—8 to 17 inches; medial loam  
2Bw2—17 to 25 inches; gravelly sandy loam  
2C—25 to 56 inches; gravelly loamy coarse sand  
2Cr—56 to 66 inches; weathered bedrock

### **Characteristics of Weitas**

#### **Setting**

*Landform:* Slumps, mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loamy colluvium derived from granite and/or metamorphic rock  
*Slope range:* 20 to 40 percent

## Soil Survey of Clearwater Area, Idaho

*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Sitka alder/miner's lettuce (CN001)

### **Typical profile**

A—0 to 14 inches; medial loam  
Bw1—14 to 22 inches; medial loam  
2Bw2—22 to 37 inches; gravelly loam  
2C1—37 to 43 inches; gravelly loamy sand  
3C2—43 to 60 inches; very gravelly loam

### ***Dissimilar Minor Components***

#### **Vaywood soils**

*Percentage of map unit:* 6 percent  
*Landform:* Slumps on mountain slopes

#### **Handoff soils**

*Percentage of map unit:* 2 percent  
*Landform:* Drainageways

#### **Rock outcrop**

*Percentage of map unit:* 2 percent  
*Landform:* Convex areas of mountain slopes

## ***76—Flewsie ashy silt loam, 35 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,800 to 4,700 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Flewsie, high precipitation, and similar soils:* 75 percent  
*Dissimilar minor components:* 25 percent

### ***Characteristics of Flewsie, High Precipitation***

#### **Setting**

*Landform:* Hills  
*Downslope shape:* Concave  
*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northeast

*Aspect (range):* Northwest to southeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or quartzite

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

A—0 to 4 inches; ashy silt loam

Bw1—4 to 15 inches; ashy silt loam

2Bw2—15 to 37 inches; fine sandy loam

2C—37 to 60 inches; loamy very fine sand

### ***Dissimilar Minor Components***

#### **Boulder creek soils, high precipitation**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

#### **Marble creek soils**

*Percentage of map unit:* 10 percent

*Landform:* Sharp, convex mountain slopes

#### **Nakarna soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

## ***77—Flewsie, low precipitation-Flewsie, dry complex, 30 to 60 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,100 to 3,800 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Flewsie, low precipitation, and similar soils:* 70 percent

*Flewsie, dry, and similar soils:* 20 percent

*Dissimilar minor component:* 10 percent

**Characteristics of Flewsie, Low Precipitation**

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or quartzite  
*Slope range:* 30 to 60 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 7 inches; ashy silt loam  
Bw1—7 to 13 inches; ashy silt loam  
Bw2—13 to 16 inches; ashy silt loam  
2Bw3—16 to 23 inches; fine sandy loam  
2Bw4—23 to 31 inches; fine sandy loam  
2BC—31 to 46 inches; fine sandy loam  
2C—46 to 62 inches; loamy fine sand

**Characteristics of Flewsie, Dry**

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or quartzite  
*Slope range:* 30 to 60 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.6 inches)



**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/queencup beadlily (CN530)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw1—7 to 13 inches; ashy silt loam

Bw2—13 to 16 inches; ashy silt loam

2Bw3—16 to 23 inches; fine sandy loam

2Bw4—23 to 31 inches; fine sandy loam

2BC—31 to 46 inches; fine sandy loam

2C—46 to 62 inches; loamy fine sand

***Dissimilar Minor Component***

**Brodeer soils, dry**

*Percentage of map unit: 10 percent*

*Landform: Smooth mountain slopes*

***78—Floodwood ashy silt loam, 35 to 65 percent slopes***

***Map Unit Setting***

*General landscape: Mountains, foothills*

*Major land resource area (MLRA): 43A—Northern Rocky Mountains*

*Elevation: 2,400 to 4,800 feet*

*Mean annual precipitation: 55 to 65 inches*

*Mean annual air temperature: 38 to 44 degrees F*

*Frost-free period: 50 to 110 days*

***Map Unit Composition***

*Floodwood and similar soils: 75 percent*

*Dissimilar minor components: 25 percent*

***Characteristics of Floodwood***

**Setting**

*Landform: Hills, mountain slopes*

*Downslope shape: Concave*

*Across-slope shape: Concave*

*Aspect (representative): East*

*Aspect (range): North to south (clockwise)*

**Properties and qualities**

*Parent material: Volcanic ash over colluvium derived from gneiss, schist, and/or anorthosite*

*Slope range: 35 to 65 percent*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Well drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: None*

*Ponding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Salinity (maximum): Not saline*

*Sodicity (maximum): Not sodic*

*Available water capacity (entire profile): Moderate (about 8.4 inches)*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/oakfern (CN555)*

**Typical profile**

A—0 to 5 inches; ashy silt loam

Bw—5 to 12 inches; ashy silt loam

2Bt—12 to 38 inches; loam

2C—38 to 60 inches; gravelly fine sandy loam

***Dissimilar Minor Components***

**Garveson soils, high precipitation**

*Percentage of map unit: 10 percent*

*Landform: Smooth and concave mountain slopes*

**Boulder creek soils**

*Percentage of map unit: 5 percent*

*Landform: Mountain slopes*

**Jacot soils**

*Percentage of map unit: 5 percent*

*Landform: Concave mountain slopes*

**Keeler soils, warm**

*Percentage of map unit: 5 percent*

*Landform: Convex mountain slopes*

**79—Floodwood, warm-Keeler complex, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape: Mountains*

*Major land resource area (MLRA): 43A—Northern Rocky Mountains*

*Elevation: 2,550 to 3,600 feet*

*Mean annual precipitation: 40 to 45 inches*

*Mean annual air temperature: 38 to 44 degrees F*

*Frost-free period: 50 to 110 days*

***Map Unit Composition***

*Floodwood, warm, and similar soils: 45 percent*

*Keeler and similar soils: 40 percent*

*Dissimilar minor components: 15 percent*

***Characteristics of Floodwood, Warm***

**Setting**

*Landform: Mountain slopes*

*Downslope shape: Linear*

*Across-slope shape: Concave*

*Aspect (representative): Northwest*

*Aspect (range): Southwest to northeast (clockwise)*

**Properties and qualities**

*Parent material: Volcanic ash over colluvium derived from gneiss, schist, and/or anorthosite*

*Slope range: 35 to 65 percent*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Well drained*

## Soil Survey of Clearwater Area, Idaho

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt1—13 to 35 inches; loam

2Bt2—35 to 55 inches; fine sandy loam

2C—55 to 63 inches; fine sandy loam

### ***Characteristics of Keeler***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam

2Bt2—39 to 48 inches; gravelly sandy loam

2C—48 to 74 inches; gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Bigtalk soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

**Mushel soils**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**80—Floodwood-Keeler complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,400 to 4,800 feet

*Mean annual precipitation:* 40 to 65 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Floodwood and similar soils:* 50 percent

*Keeler, warm, and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Floodwood***

**Setting**

*Landform:* Hills

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or anorthosite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/oakfern (CN555)

**Typical profile**

A—0 to 5 inches; ashy silt loam

Bw—5 to 12 inches; ashy silt loam

2Bt—12 to 38 inches; loam

2C—38 to 60 inches; gravelly fine sandy loam

***Characteristics of Keeler, Warm***

**Setting**

*Landform:* Hills

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Southwest

*Aspect (range):* South to west (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy silt loam

BA—7 to 18 inches; ashy silt loam

Bt1—18 to 38 inches; loam

2Bt2—38 to 62 inches; sandy loam

***Dissimilar Minor Components***

**Jacot soils**

*Percentage of map unit:* 10 percent

*Landform:* Ridges, mountain slopes

**Odonnell soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

***81—Floodwood-Keeler complex, 35 to 65 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,400 to 4,800 feet

*Mean annual precipitation:* 40 to 65 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Floodwood and similar soils:* 50 percent  
*Keeler, warm, and similar soils:* 30 percent  
*Dissimilar minor components:* 20 percent

### **Characteristics of Floodwood**

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* West to north (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or anorthosite  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.4 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/oakfern (CN555)

#### **Typical profile**

A—0 to 5 inches; ashy silt loam  
Bw—5 to 12 inches; ashy silt loam  
2Bt—12 to 38 inches; loam  
2C—38 to 60 inches; gravelly fine sandy loam

### **Characteristics of Keeler, Warm**

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* South  
*Aspect (range):* Southeast to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline



*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadleily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy silt loam

BA—7 to 18 inches; ashy silt loam

Bt1—18 to 38 inches; loam

2Bt2—38 to 62 inches; sandy loam

***Dissimilar Minor Components***

**Garveson soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

**Bouldercreek soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Odonnell soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**82—Flumecreek ashy loam, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,600 to 5,000 feet

*Mean annual precipitation:* 50 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Flumecreek and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Flumecreek***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 10 inches; ashy loam  
Bw1—10 to 21 inches; ashy loam  
2Bw2—21 to 32 inches; very cobbly loam  
2Bt1—32 to 43 inches; very gravelly sandy clay loam  
2Bt2—43 to 52 inches; extremely stony sandy clay loam  
2Bt3—52 to 67 inches; extremely stony sandy loam

***Dissimilar Minor Components***

**Stepoff soils**

*Percentage of map unit:* 7 percent  
*Landform:* Concave draws on mountain slopes

**Boulder creek soils, moist**

*Percentage of map unit:* 3 percent  
*Landform:* Sharp, convex mountain slopes

**Colluvial land, talus**

*Percentage of map unit:* 3 percent  
*Landform:* Concave chutes on mountain slopes

**Rock outcrop**

*Percentage of map unit:* 2 percent  
*Landform:* Convex areas of mountain slopes

***83—Flumecreek-Stepoff-Dworshak complex, 15 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,600 to 4,800 feet  
*Mean annual precipitation:* 40 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Flumecreek and similar soils:* 65 percent  
*Stepoff and similar soils:* 20 percent  
*Dworshak, dry, and similar soils:* 15 percent

### ***Characteristics of Flumecreek***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 10 inches; ashy loam  
Bw1—10 to 21 inches; ashy loam  
2Bw2—21 to 32 inches; very cobbly loam  
2Bt1—32 to 43 inches; very gravelly sandy clay loam  
2Bt2—43 to 52 inches; extremely stony sandy clay loam  
2Bt3—52 to 67 inches; extremely stony sandy loam

### ***Characteristics of Stepoff***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Sitka alder/miner's lettuce (CN001)

**Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 8 inches; medial loam

Bw1—8 to 24 inches; medial loam

2Bw2—24 to 38 inches; gravelly loam

2Bw3—38 to 46 inches; gravelly loam

2C—46 to 63 inches; very cobbly loam

***Characteristics of Dworshak, Dry***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/wild ginger (CN516)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 11 inches; ashy silt loam

Bw—11 to 18 inches; ashy silt loam

2E/Bt—18 to 31 inches; silt loam

3Bt—31 to 63 inches; very gravelly clay loam

***84—Fordcreek loam, 40 to 75 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 2,200 feet

## Soil Survey of Clearwater Area, Idaho

*Mean annual precipitation:* 23 to 28 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Fordcreek and similar soils:* 70 percent

*Dissimilar minor components:* 30 percent

### **Characteristics of Fordcreek**

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess over residuum derived from granite and/or metamorphic rock

*Slope range:* 40 to 75 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

#### **Typical profile**

A—0 to 6 inches; loam

Bt1—6 to 16 inches; loam

Bt2—16 to 27 inches; clay loam

Bt3—27 to 41 inches; clay loam

Cr—41 to 51 inches; weathered bedrock

### **Dissimilar Minor Components**

#### **Rock outcrop**

*Percentage of map unit:* 10 percent

*Landform:* Convex areas of canyons

#### **Whiskeycreek soils**

*Percentage of map unit:* 10 percent

*Landform:* Canyons

#### **Ahsahka soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches

#### **Texascreek soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Convex side slopes of canyons

## **85—Fordcreek loam, 5 to 15 percent slopes**

### **Map Unit Setting**

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 2,200 feet

*Mean annual precipitation:* 23 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Fordcreek and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Fordcreek**

#### **Setting**

*Landform:* Canyons, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Loess over residuum derived from granite and/or metamorphic rock

*Slope range:* 5 to 15 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

#### **Typical profile**

A—0 to 6 inches; loam

Bt1—6 to 16 inches; loam

Bt2—16 to 27 inches; clay loam

Bt3—27 to 41 inches; clay loam

Cr—41 to 51 inches; weathered bedrock

### **Dissimilar Minor Components**

#### **Ahsahka soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Convex side slopes of canyons

#### **Texascreek soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Convex areas of canyons

## **86—Garveson-Floodwood complex, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,400 to 4,800 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Garveson, high precipitation, and similar soils:* 55 percent

*Floodwood and similar soils:* 30 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Garveson, High Precipitation**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 14 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 18 inches; ashy silt loam

2BC—18 to 25 inches; very gravelly loamy coarse sand

2C—25 to 62 inches; very gravelly coarse sand

### **Characteristics of Floodwood**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave



*Across-slope shape:* Concave  
*Aspect (representative):* Southwest  
*Aspect (range):* Southeast to west (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or anorthosite  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/oakfern (CN555)

**Typical profile**

A—0 to 5 inches; ashy silt loam  
Bw—5 to 12 inches; ashy silt loam  
2Bt—12 to 38 inches; loam  
2C—38 to 60 inches; gravelly fine sandy loam

***Dissimilar Minor Components***

**Bouldercreek soils**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

**Garveson soils, deep**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

**Jacot soils**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

***87—Gramil-Lewhand complex, 0 to 2 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,000 to 3,200 feet  
*Mean annual precipitation:* 30 to 35 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Gramil and similar soils:* 60 percent  
*Lewhand and similar soils:* 30 percent  
*Dissimilar minor components:* 10 percent

### ***Characteristics of Gramil***

#### **Setting**

*Landform:* Lake terraces

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Alluvium and/or loess over lacustrine deposits

*Slope range:* 0 to 2 percent

*Depth to restrictive feature:* 20 to 30 inches to an abrupt textural change

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* Very brief (see Water Features table)

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 6 inches  
(see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Ap—0 to 12 inches; ashy silty clay loam

Bw—12 to 19 inches; ashy silt loam

B/E—19 to 27 inches; clay loam

2Btss—27 to 39 inches; clay

3Bss—39 to 70 inches; clay

### ***Characteristics of Lewhand***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Volcanic ash over mixed alluvium

*Slope range:* 0 to 2 percent

*Depth to restrictive feature:* 13 to 19 inches to a fragipan

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 2 inches  
(see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* MEADOW (R009XY018ID)

**Typical profile**

A—0 to 8 inches; ashy silty clay loam

BE—8 to 12 inches; silty clay loam

E—12 to 18 inches; silt loam

Btx—18 to 32 inches; silt loam

Bt—32 to 60 inches; stratified silt loam to sand

***Dissimilar Minor Components***

**Setters soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave areas of plateaus

**Teneb soils**

*Percentage of map unit:* 3 percent

*Landform:* Drainageways

**Wilkins soils**

*Percentage of map unit:* 2 percent

*Landform:* Swales

**88—Gramil-Reggear complex, 2 to 6 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,200 feet

*Mean annual precipitation:* 30 to 35 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Gramil and similar soils:* 50 percent

*Reggear and similar soils:* 40 percent

*Dissimilar minor component:* 10 percent

***Characteristics of Gramil***

**Setting**

*Landform:* Lake terraces

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Alluvium and/or loess over lacustrine deposits

*Slope range:* 2 to 5 percent

*Depth to restrictive feature:* 20 to 30 inches to an abrupt textural change

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* Very brief (see Water Features table)

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 6 inches  
(see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Ap—0 to 12 inches; ashy silty clay loam

Bw—12 to 19 inches; ashy silt loam

B/E—19 to 27 inches; clay loam

2Btss—27 to 39 inches; clay

3Bss—39 to 70 inches; clay

***Characteristics of Reggear***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 2 to 6 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 18 to 34 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy silt loam

Bw—8 to 13 inches; ashy silt loam

2E—13 to 22 inches; silt loam

2B/E—22 to 31 inches; silt loam

2Btx1—31 to 60 inches; silt loam

3Btx2—60 to 86 inches; silt loam

***Dissimilar Minor Component***

**Setters soils**

*Percentage of map unit:* 10 percent

*Landform:* Convex hillslopes

**89—Grandad ashy silt loam, 15 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 3,000 to 3,800 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Grandad and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Grandad**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

### **Dissimilar Minor Components**

#### **Poorman soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

#### **Nakarna soils, warm**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

#### **Keeler soils**

*Percentage of map unit:* 2 percent

*Landform:* Smooth mountain slopes

## **90—Grandad, dry-Grandad complex, 15 to 40 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 4,000 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Grandad, dry, and similar soils:* 70 percent

*Grandad and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Grandad, Dry**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

### **Characteristics of Grandad**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss  
*Slope range:* 15 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy silt loam  
Bw—3 to 19 inches; ashy silt loam  
2Bt1—19 to 30 inches; loam  
2Bt2—30 to 39 inches; gravelly loam  
2BC—39 to 45 inches; gravelly loam  
2C1—45 to 58 inches; loam  
2C2—58 to 64 inches; paragravelly sandy loam

### ***Dissimilar Minor Components***

#### **Brodeer soils**

*Percentage of map unit:* 5 percent  
*Landform:* Smooth mountain slopes

#### **Poorman soils**

*Percentage of map unit:* 5 percent  
*Landform:* Ridges, mountain slopes

## **91—Grandad, dry-Grandad complex, 40 to 60 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,400 to 4,400 feet  
*Mean annual precipitation:* 30 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Grandad, dry, and similar soils:* 70 percent  
*Grandad and similar soils:* 20 percent  
*Dissimilar minor components:* 10 percent



### ***Characteristics of Grandad, Dry***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss  
*Slope range:* 40 to 60 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy silt loam  
Bw—3 to 19 inches; ashy silt loam  
2Bt1—19 to 30 inches; loam  
2Bt2—30 to 39 inches; gravelly loam  
2BC—39 to 45 inches; gravelly loam  
2C1—45 to 58 inches; loam  
2C2—58 to 64 inches; paragravelly sandy loam

### ***Characteristics of Grandad***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss  
*Slope range:* 40 to 60 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/wild ginger (CN545)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

***Dissimilar Minor Components***

**Brodeer soils, dry**

*Percentage of map unit: 5 percent*

*Landform: Mountain slopes*

**Poorman soils**

*Percentage of map unit: 5 percent*

*Landform: Ridges, mountain slopes*

**92—Grandad-Rettig complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape: Mountains*

*Major land resource area (MLRA): 43A—Northern Rocky Mountains*

*Elevation: 3,800 to 4,600 feet*

*Mean annual precipitation: 40 to 50 inches*

*Mean annual air temperature: 38 to 44 degrees F*

*Frost-free period: 50 to 110 days*

***Map Unit Composition***

*Grandad and similar soils: 55 percent*

*Rettig and similar soils: 40 percent*

*Dissimilar minor components: 5 percent*

***Characteristics of Grandad***

**Setting**

*Landform: Ridges, mountain slopes*

*Downslope shape: Convex*

*Across-slope shape: Convex*

*Aspect (representative): Northwest*

*Aspect (range): Southwest to northeast (clockwise)*

**Properties and qualities**

*Parent material: Volcanic ash over colluvium derived from schist and/or gneiss*

*Slope range: 15 to 35 percent*

*Depth to restrictive feature: None within a depth of 60 inches*

*Drainage class: Well drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: None*

## Soil Survey of Clearwater Area, Idaho

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

### **Characteristics of Rettig**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Geomorphic position (two-dimensional):* Footslopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam

2Bw2—27 to 34 inches; gravelly sandy loam

2Bw3—34 to 47 inches; gravelly sandy loam

2BC—47 to 63 inches; gravelly sandy loam

2C—63 to 66 inches; very gravelly sandy loam

***Dissimilar Minor Components***

**Nakarna soils, high precipitation**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**93—Grandad-Rettig complex, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,250 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Grandad, wet, and similar soils:* 60 percent

*Rettig, wet, and similar soils:* 35 percent

*Dissimilar minor components:* 5 percent

***Characteristics of Grandad, Wet***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/maidenhair fern (CN560)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam  
2C1—45 to 58 inches; loam  
2C2—58 to 64 inches; paragravelly sandy loam

### ***Characteristics of Rettig, Wet***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.7 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/maidenhair fern (CN560)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 7 inches; ashy loam  
Bw1—7 to 27 inches; ashy loam  
2Bw2—27 to 34 inches; gravelly sandy loam  
2Bw3—34 to 47 inches; gravelly sandy loam  
2BC—47 to 63 inches; gravelly sandy loam  
2C—63 to 66 inches; very gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Poorman soils**

*Percentage of map unit:* 3 percent  
*Landform:* Sharp, convex mountain slopes

#### **Odonnell soils**

*Percentage of map unit:* 2 percent  
*Landform:* Benches

## ***94—Grandad-Scand complex, 35 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,800 to 3,500 feet  
*Mean annual precipitation:* 40 to 45 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Grandad, dry, and similar soils:* 45 percent

*Scand and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Grandad, Dry**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 40 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

### **Characteristics of Scand**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from mica schist and/or gneiss

*Slope range:* 35 to 50 percent

*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.4 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; ashy silt loam

Bw—4 to 16 inches; ashy silt loam

2Bt1—16 to 27 inches; silt loam

3Bt2—27 to 53 inches; loam

3BC—53 to 63 inches; loamy sand

### ***Dissimilar Minor Components***

#### **Poorman soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

#### **Nakarna soils, warm**

*Percentage of map unit:* 5 percent

*Landform:* Ridges, mountain slopes

## **95—Grangemont-Kauder complex, 5 to 20 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Grangemont and similar soils:* 60 percent

*Kauder and similar soils:* 35 percent

*Dissimilar minor components:* 5 percent

### ***Characteristics of Grangemont***

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)



**Properties and qualities**

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 18.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadrill (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 14 inches; ashy silt loam

2B/E—14 to 38 inches; silt loam

2Bt—38 to 95 inches; silty clay loam

***Characteristics of Kauder***

**Setting**

*Landform:* Ridges on hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* 22 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 13 to 28 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadrill (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 15 inches; ashy silt loam

2E—15 to 23 inches; silt loam  
2B/E—23 to 34 inches; silt loam  
3Btx—34 to 95 inches; silty clay loam

***Dissimilar Minor Components***

**Riswold soils**

*Percentage of map unit:* 3 percent  
*Landform:* Steep hillslopes on plateaus

**Aldermant soils**

*Percentage of map unit:* 1 percent  
*Landform:* Convex mountain slopes

**Elkridge soils**

*Percentage of map unit:* 1 percent  
*Landform:* Escarpments

**96—Grangemont-Kauder complex, dry, 5 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 3,400 feet  
*Mean annual precipitation:* 30 to 40 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Grangemont, dry, and similar soils:* 50 percent  
*Kauder, dry, and similar soils:* 40 percent  
*Dissimilar minor components:* 10 percent

***Characteristics of Grangemont, Dry***

**Setting**

*Landform:* Hillslopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over reworked loess  
*Slope range:* 5 to 20 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 18.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 14 inches; ashy silt loam

2B/E—14 to 38 inches; silt loam

2Bt—38 to 95 inches; silty clay loam

***Characteristics of Kauder, Dry***

**Setting**

*Landform:* Hillslopes, ridges

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* 22 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 13 to 28 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 15 inches; ashy silt loam

2E—15 to 23 inches; silt loam

2B/E—23 to 34 inches; silt loam

3Btx—34 to 95 inches; silty clay loam

***Dissimilar Minor Components***

**Reggear soils**

*Percentage of map unit:* 5 percent

*Landform:* Hills on plateaus

**Brequito soils, dry**

*Percentage of map unit:* 3 percent

*Landform:* Ridges

**Jaype soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills on undulating plateaus

## **97—Grangemont-Kauder complex, 5 to 30 percent slopes**

### **Map Unit Setting**

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,200 to 3,100 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Grangemont and similar soils:* 60 percent

*Kauder, moist, and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Grangemont**

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 5 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 18.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 14 inches; ashy silt loam

2B/E—14 to 38 inches; silt loam

2Bt—38 to 95 inches; silty clay loam

### **Characteristics of Kauder, Moist**

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 30 percent

*Depth to restrictive feature:* 22 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 13 to 28 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 15 inches; ashy silt loam

2E—15 to 23 inches; silt loam

2B/E—23 to 34 inches; silt loam

3Btx—34 to 95 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Bargamin soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Hillslopes on plateaus

#### **Statemeadow soils**

*Percentage of map unit:* 5 percent

*Landform:* Hillslopes on plateaus

## **98—Grangemont-Riswold complex, 10 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,200 to 2,800 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Grangemont, wet, and similar soils:* 45 percent

*Riswold and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

### ***Characteristics of Grangemont, Wet***

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 10 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 18.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 14 inches; ashy silt loam

2B/E—14 to 38 inches; silt loam

2Bt—38 to 95 inches; silty clay loam

### ***Characteristics of Riswold***

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 10 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/queencup beadlily (CN530)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; ashy silt loam

Bw—9 to 17 inches; ashy silt loam

2E/B—17 to 27 inches; silt loam

2B/E—27 to 44 inches; silt loam

3Bt1—44 to 60 inches; cobbly silty clay loam

3Bt2—60 to 72 inches; very cobbly silty clay loam

***Dissimilar Minor Components***

**Mushel soils, wet**

*Percentage of map unit: 10 percent*

*Landform: Convex, dissected footslopes of mountains*

**Grangemont soils**

*Percentage of map unit: 5 percent*

*Landform: Concave hillslopes*

**Riswold soils, wet**

*Percentage of map unit: 5 percent*

*Landform: Convex hillslopes on plateaus*

**99—Grasshopper ashy loam, 0 to 3 percent slopes**

***Map Unit Setting***

*General landscape: Mountains, plateaus*

*Major land resource area (MLRA): 43A—Northern Rocky Mountains*

*Elevation: 2,750 to 3,500 feet*

*Mean annual precipitation: 32 to 50 inches*

*Mean annual air temperature: 38 to 44 degrees F*

*Frost-free period: 50 to 110 days*

***Map Unit Composition***

*Grasshopper and similar soils: 80 percent*

*Dissimilar minor components: 20 percent*

***Characteristics of Grasshopper***

**Setting**

*Landform: Flood plains*

*Downslope shape: Linear*

*Across-slope shape: Linear*

*Aspect (range): All aspects*

**Properties and qualities**

*Parent material: Mixed alluvium*

*Slope range: 0 to 3 percent*

*Depth to restrictive feature: 29 to 60 inches to strongly contrasting textural stratification*

*Drainage class: Poorly drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: Occasional (see Water Features table)*



## Soil Survey of Clearwater Area, Idaho

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the surface to a depth of about 24 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 5w

*Ecological site:* MEADOW (R009XY018ID)

### **Typical profile**

A—0 to 16 inches; ashy loam

Btg—16 to 22 inches; clay loam

E—22 to 40 inches; sandy loam

Btgb—40 to 53 inches; loam

Cgb1—53 to 58 inches; extremely gravelly sandy clay loam

Cgb2—58 to 64 inches; loam

### ***Dissimilar Minor Components***

#### **Teneb soils**

*Percentage of map unit:* 12 percent

*Landform:* Drainageways

#### **Aquandic Dystrudepts**

*Percentage of map unit:* 5 percent

*Landform:* Flood plains, drainageways

#### **Grice soils**

*Percentage of map unit:* 3 percent

*Landform:* Depressions near streams, saturated areas below springs on hillslopes

## **100—Gwin-Kettenbach complex, 35 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,200 to 3,000 feet

*Mean annual precipitation:* 22 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### ***Map Unit Composition***

*Gwin and similar soils:* 45 percent

*Kettenbach and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

### ***Characteristics of Gwin***

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium over greenstone and/or basalt  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very low (about 1.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE  
(R009XY026ID)

**Typical profile**

A1—0 to 4 inches; cobbly silt loam  
A2—4 to 8 inches; very gravelly silt loam  
Bt—8 to 13 inches; very gravelly silty clay loam  
R—13 to 23 inches; unweathered bedrock

***Characteristics of Kettenbach***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and colluvium derived from basalt  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Low (about 3.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Ecological site:* SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)

**Typical profile**

A—0 to 3 inches; gravelly silt loam  
AB—3 to 11 inches; very gravelly silt loam  
Bt—11 to 36 inches; very cobbly silty clay loam  
R—36 to 46 inches; unweathered bedrock

***Dissimilar Minor Components***

**Rock outcrop**

*Percentage of map unit:* 10 percent

*Landform:* Convex areas on side slopes of canyons

**Keuterville soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave draws in canyons

**101—Gwin-Kettenbach-Keuterville complex, 10 to 25 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 2,500 to 3,000 feet

*Mean annual precipitation:* 23 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Gwin and similar soils:* 45 percent

*Kettenbach and similar soils:* 30 percent

*Keuterville and similar soils:* 20 percent

*Dissimilar minor components:* 5 percent

***Characteristics of Gwin***

**Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium over greenstone and/or basalt

*Slope range:* 10 to 25 percent

*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very low (about 1.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE  
(R009XY026ID)

**Typical profile**

A1—0 to 4 inches; cobbly silt loam  
A2—4 to 8 inches; very gravelly silt loam  
Bt—8 to 13 inches; very gravelly silty clay loam  
R—13 to 23 inches; unweathered bedrock

***Characteristics of Kettenbach***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Convex  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and colluvium derived from basalt  
*Slope range:* 10 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Low (about 3.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Ecological site:* SOUTH SLOPE LOAMY 16-22 PSSPS-FEID  
(R009XY004ID)

**Typical profile**

A—0 to 3 inches; gravelly silt loam  
AB—3 to 11 inches; very gravelly silt loam  
Bt—11 to 36 inches; very cobbly silty clay loam  
R—36 to 46 inches; unweathered bedrock

***Characteristics of Keuterville***

**Setting**

*Landform:* Structural benches, canyons  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt  
*Slope range:* 10 to 25 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 11 inches; gravelly silt loam

A2—11 to 21 inches; very gravelly silt loam

Bt1—21 to 52 inches; very gravelly silty clay loam

Bt2—52 to 64 inches; extremely gravelly silty clay loam

***Dissimilar Minor Components***

**Wellsbench soils**

*Percentage of map unit:* 4 percent

*Landform:* Benches in canyons

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of hillslopes

**102—Hildebrand-Spacecreek complex, 2 to 12 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,800 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Hildebrand and similar soils:* 55 percent

*Spacecreek, dry, and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Hildebrand***

**Setting**

*Landform:* Terraces

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash over alluvium

*Slope range:* 2 to 12 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

## Soil Survey of Clearwater Area, Idaho

*Seasonal high water table (minimum depth):* About 14 to 43 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

A—0 to 4 inches; ashy silt loam

Bw—4 to 12 inches; ashy silt loam

2Bt—12 to 40 inches; loam

2C—40 to 60 inches; silt loam

## ***Characteristics of Spacecreek, Dry***

### **Setting**

*Landform:* Terraces

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (range):* All aspects

### **Properties and qualities**

*Parent material:* Volcanic ash over mixed alluvium

*Slope range:* 2 to 12 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 14 to 40 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 10 inches; medial silt loam

Bw—10 to 16 inches; medial silt loam

2Bt—16 to 28 inches; loam

2BC—28 to 42 inches; sandy loam

2C—42 to 64 inches; silt loam

## ***Dissimilar Minor Components***

### **Mushel soils**

*Percentage of map unit:* 7 percent

*Landform:* Mountain slopes

### **Aquandic Endoaquepts**

*Percentage of map unit:* 3 percent

*Landform:* Flood plains, drainageways

## **103—Hubub ashy silt loam, 20 to 40 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,000 to 3,400 feet  
*Mean annual precipitation:* 35 to 40 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Hubub, wet, and similar soils:* 75 percent  
*Dissimilar minor components:* 25 percent

### **Characteristics of Hubub, Wet**

#### **Setting**

*Landform:* Structural benches  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or colluvium  
*Slope range:* 20 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/maidenhair fern (CN560)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 5 inches; ashy silt loam  
Bw—5 to 17 inches; ashy silt loam  
2E—17 to 19 inches; silt loam  
2Bt1—19 to 42 inches; silt loam  
2Bt2—42 to 62 inches; very cobbly loam

### **Dissimilar Minor Components**

#### **Odonnell soils**

*Percentage of map unit:* 13 percent  
*Landform:* Relict terraces, smooth and concave benches

#### **Brodeer soils**

*Percentage of map unit:* 10 percent  
*Landform:* Convex mountain slopes



**Dullaxe soils, wet**

*Percentage of map unit:* 2 percent

*Landform:* Convex and smooth mountain slopes

**104—Hubub-Dworshak complex, 5 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,200 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Hubub, wet, and similar soils:* 65 percent

*Dworshak and similar soils:* 30 percent

*Dissimilar minor component:* 5 percent

***Characteristics of Hubub, Wet***

**Setting**

*Landform:* Structural benches, mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or colluvium

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/maidenhair fern (CN560)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; ashy silt loam

Bw—5 to 17 inches; ashy silt loam

2E—17 to 19 inches; silt loam

2Bt1—19 to 42 inches; silt loam

2Bt2—42 to 62 inches; very cobbly loam

### ***Characteristics of Dworshak***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock  
*Slope range:* 5 to 20 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
Oe—2 to 3 inches; moderately decomposed plant material  
A—3 to 11 inches; ashy silt loam  
Bw—11 to 18 inches; ashy silt loam  
2E/Bt—18 to 31 inches; silt loam  
3Bt—31 to 63 inches; very gravelly clay loam

### ***Dissimilar Minor Component***

#### **Aldermant soils, cool**

*Percentage of map unit:* 5 percent  
*Landform:* Short escarpments on mountain slopes

## ***105—Hubub-Lostpete complex, 10 to 30 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,200 to 3,900 feet  
*Mean annual precipitation:* 30 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Hubub and similar soils:* 65 percent  
*Lostpete and similar soils:* 20 percent  
*Dissimilar minor components:* 15 percent

### ***Characteristics of Hubub***

#### **Setting**

*Landform:* Structural benches, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or colluvium

*Slope range:* 10 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; ashy silt loam

Bw—5 to 17 inches; ashy silt loam

2E—17 to 19 inches; silt loam

2Bt1—19 to 42 inches; silt loam

2Bt2—42 to 62 inches; very cobbly loam

### ***Characteristics of Lostpete***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess and/or colluvium derived from granite and/or gneiss

*Slope range:* 10 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; medial silt loam

Bw1—5 to 13 inches; medial silt loam

Bw2—13 to 19 inches; medial silt loam

2Bt1—19 to 29 inches; silt loam

2Bt2—29 to 42 inches; silt loam

2Bt3—42 to 52 inches; silt loam

2Bt4—52 to 66 inches; silt loam

***Dissimilar Minor Components***

**Uvi soils**

*Percentage of map unit:* 9 percent

*Landform:* Mountain slopes

**Hugus soils**

*Percentage of map unit:* 4 percent

*Landform:* Ridges, mountain slopes

**Odonnell soils**

*Percentage of map unit:* 2 percent

*Landform:* Relict terraces, concave and smooth benches on mountain slopes

**106—Hucberit medial silt loam, 15 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,400 to 5,800 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

***Map Unit Composition***

*Hucberit and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Hucberit***

**Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or schist

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Mountain hemlock/queencup beadlily (CN685)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 6 inches; medial silt loam  
Bw1—6 to 14 inches; medial silt loam  
Bw2—14 to 21 inches; medial silt loam  
2Bw3—21 to 28 inches; gravelly loam  
2Bw4—28 to 36 inches; gravelly sandy loam  
2BC—36 to 48 inches; gravelly sandy loam  
3C—48 to 62 inches; loamy coarse sand

### ***Dissimilar Minor Components***

#### **Vaywood soils**

*Percentage of map unit:* 10 percent  
*Landform:* Ridges, mountain slopes

#### **Weitas soils**

*Percentage of map unit:* 5 percent  
*Landform:* Concave mountain slopes

## **107—Hucberit-Vaywood complex, 35 to 70 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 4,600 to 5,600 feet  
*Mean annual precipitation:* 50 to 60 inches  
*Mean annual air temperature:* 38 to 41 degrees F  
*Frost-free period:* 30 to 100 days

### ***Map Unit Composition***

*Hucberit and similar soils:* 40 percent  
*Vaywood, high precipitation, and similar soils:* 35 percent  
*Dissimilar minor components:* 25 percent

### ***Characteristics of Hucberit***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or schist

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Mountain hemlock/queencup beadlily (CN685)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 14 inches; medial silt loam

Bw2—14 to 21 inches; medial silt loam

2Bw3—21 to 28 inches; gravelly loam

2Bw4—28 to 36 inches; gravelly sandy loam

2BC—36 to 48 inches; gravelly sandy loam

3C—48 to 62 inches; loamy coarse sand

## ***Characteristics of Vaywood, High Precipitation***

### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* 14 to 24 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Mountain hemlock/queencup beadlily (CN685)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 7 inches; medial silt loam  
Bw1—7 to 15 inches; medial silt loam  
Bw2—15 to 20 inches; medial silt loam  
2Bw3—20 to 25 inches; very cobbly loam  
2Bw4—25 to 38 inches; very cobbly sandy loam  
2BC—38 to 47 inches; gravelly sandy loam  
2C—47 to 62 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Boulder creek soils, moist**

*Percentage of map unit:* 12 percent  
*Landform:* Mountain slopes

**Vaywood soils, dry**

*Percentage of map unit:* 6 percent  
*Landform:* Ridges, convex mountain slopes

**Handoff soils**

*Percentage of map unit:* 4 percent  
*Landform:* Drainageways

**Fico soils**

*Percentage of map unit:* 3 percent  
*Landform:* Mountain slopes

***108—Hugus ashy silt loam, 15 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,800 to 4,900 feet  
*Mean annual precipitation:* 45 to 55 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Hugus and similar soils:* 85 percent  
*Dissimilar minor components:* 15 percent

***Characteristics of Hugus***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification



## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 3 inches; moderately decomposed plant material  
A—3 to 7 inches; ashy silt loam  
Bw—7 to 19 inches; ashy silt loam  
2Bt1—19 to 32 inches; very gravelly loam  
2Bt2—32 to 51 inches; very gravelly sandy loam  
2C—51 to 60 inches; very gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Dworshak soils**

*Percentage of map unit:* 10 percent  
*Landform:* Smooth mountain slopes

#### **Grandad soils**

*Percentage of map unit:* 3 percent  
*Landform:* Ridges, mountain slopes

#### **Rock outcrop**

*Percentage of map unit:* 2 percent  
*Landform:* Convex areas of mountain slopes

## **109—Hugus ashy silt loam, 35 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,400 to 4,400 feet  
*Mean annual precipitation:* 45 to 55 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Hugus and similar soils:* 90 percent  
*Dissimilar minor components:* 10 percent

### ***Characteristics of Hugus***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 32 inches; very gravelly loam

2Bt2—32 to 51 inches; very gravelly sandy loam

2C—51 to 60 inches; very gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Hugus soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

#### **Hugus soils, moist**

*Percentage of map unit:* 4 percent

*Landform:* Draws on mountain slopes

#### **Elkberry soils**

*Percentage of map unit:* 1 percent

*Landform:* Structural benches

## **110—Hugus ashy silt loam, moist, 15 to 30 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,600 to 4,700 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Hugus, moist, and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

### **Characteristics of Hugus, Moist**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock

*Slope range:* 15 to 30 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 32 inches; very gravelly loam

2Bt2—32 to 51 inches; very gravelly sandy loam

2C—51 to 60 inches; very gravelly sandy loam

### **Dissimilar Minor Components**

#### **Boulder creek soils, moist**

*Percentage of map unit:* 9 percent

*Landform:* Sharp, convex mountain slopes

#### **Dworshak soils**

*Percentage of map unit:* 8 percent

*Landform:* Smooth mountain slopes

#### **Stepoff soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes

**Hugus soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

**111—Hugus ashy silt loam, moist, 30 to 65 percent slopes**

**Map Unit Setting**

*General landscape:* Foothills

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,150 to 4,700 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 43 to 45 degrees F

*Frost-free period:* 50 to 110 days

**Map Unit Composition**

*Hugus, high precipitation, and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

**Characteristics of Hugus, High Precipitation**

**Setting**

*Landform:* Hills

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* Northwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock

*Slope range:* 30 to 65 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 32 inches; very gravelly loam

2Bt2—32 to 51 inches; very gravelly sandy loam

2C—51 to 60 inches; very gravelly sandy loam

***Dissimilar Minor Components***

**Bouldercreek soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Floodwood soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes, ridges

**Nakarna soils, high precipitation**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes, ridges

**Vaywood soils, cold**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes

***112—Hugus, moist-Hugus complex, 35 to 75 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,600 to 4,400 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Hugus, moist, and similar soils:* 75 percent

*Hugus and similar soils:* 15 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Hugus, Moist***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

## Soil Survey of Clearwater Area, Idaho

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 32 inches; very gravelly loam

2Bt2—32 to 51 inches; very gravelly sandy loam

2C—51 to 60 inches; very gravelly sandy loam

## ***Characteristics of Hugus***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 32 inches; very gravelly loam

2Bt2—32 to 51 inches; very gravelly sandy loam

2C—51 to 60 inches; very gravelly sandy loam

***Dissimilar Minor Components***

**Bouldercreek soils, moist**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

**Stepoff soils**

*Percentage of map unit:* 3 percent

*Landform:* Concave mountain slopes

**Dworshak soils**

*Percentage of map unit:* 2 percent

*Landform:* Smooth mountain slopes

**Shattuck soils, moist**

*Percentage of map unit:* 2 percent

*Landform:* Ridges, convex mountain slopes

**113—Hugus-Dworshak complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,200 to 4,400 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Hugus and similar soils:* 60 percent

*Dworshak and similar soils:* 35 percent

*Dissimilar minor component:* 5 percent

***Characteristics of Hugus***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline



## Soil Survey of Clearwater Area, Idaho

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 32 inches; very gravelly loam

2Bt2—32 to 51 inches; very gravelly sandy loam

2C—51 to 60 inches; very gravelly sandy loam

### ***Characteristics of Dworshak***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 11 inches; ashy silt loam

Bw—11 to 18 inches; ashy silt loam

2E/Bt—18 to 31 inches; silt loam

3Bt—31 to 63 inches; very gravelly clay loam

### ***Dissimilar Minor Component***

#### **Shattuck soils**

*Percentage of map unit:* 5 percent

*Landform:* Ridges, convex mountain slopes

## **114—Itzee sandy loam, 0 to 12 percent slopes**

### **Map Unit Setting**

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,050 to 1,160 feet

*Mean annual precipitation:* 24 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Itzee and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Itzee**

#### **Setting**

*Landform:* Terraces

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 12 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* High

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; sandy loam

Bw—4 to 12 inches; fine sandy loam

C1—12 to 47 inches; loamy fine sand

C2—47 to 60 inches; extremely cobbly fine sand

### **Dissimilar Minor Components**

#### **Oxyaquic Xerofluvents**

*Percentage of map unit:* 9 percent

*Landform:* Flood plains

#### **Riverwash**

*Percentage of map unit:* 1 percent

*Landform:* Point bars

## **115—Jacket silt loam, 12 to 30 percent slopes**

### **Map Unit Setting**

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,600 to 3,300 feet

*Mean annual precipitation:* 23 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Jacket and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Jacket**

#### **Setting**

*Landform:* Structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 12 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

#### **Typical profile**

Oe—0 to 2 inches; moderately decomposed plant material

A—2 to 16 inches; silt loam

AB—16 to 33 inches; silty clay loam

Bt—33 to 64 inches; silty clay

### **Dissimilar Minor Components**

#### **Wellsbench soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches in canyons

#### **Keuterville soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex escarpments in canyons

#### **Klickson soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of benches in canyons

**Kettenbach soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of benches in canyons

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas on side slopes of canyons

**116—Jacket silt loam, 3 to 12 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands, plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,200 to 4,300 feet

*Mean annual precipitation:* 22 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Jacket and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Jacket***

**Setting**

*Landform:* Hills, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 3 to 12 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 2e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Ap—0 to 7 inches; silt loam

Bt1—7 to 27 inches; silty clay loam

Bt2—27 to 56 inches; silty clay loam

Bt3—56 to 63 inches; silty clay

***Dissimilar Minor Components***

**Driscoll soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches in canyons

**Keuterville soils**

*Percentage of map unit:* 5 percent

*Landform:* Side slopes of canyons

**Larkin soils**

*Percentage of map unit:* 5 percent

*Landform:* Hills on plateaus, benches in canyons

**117—Jacket-Wellsbench complex, 20 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,600 to 3,000 feet

*Mean annual precipitation:* 23 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Jacket and similar soils:* 45 percent

*Wellsbench and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Jacket***

**Setting**

*Landform:* Structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 20 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Oe—0 to 2 inches; moderately decomposed plant material

A—2 to 16 inches; silt loam

AB—16 to 33 inches; silty clay loam

Bt—33 to 64 inches; silty clay

### ***Characteristics of Wellsbench***

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 20 to 35 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Ecological site:* LOAMY 16-22 FEID-PSSPS (R009XY003ID)

#### **Typical profile**

A—0 to 6 inches; silt loam

Bt1—6 to 14 inches; gravelly silty clay loam

Bt2—14 to 41 inches; very cobbly silty clay loam

R—41 to 51 inches; unweathered bedrock

### ***Dissimilar Minor Components***

#### **Keuterville soils**

*Percentage of map unit:* 9 percent

*Landform:* Draws in canyons

#### **Gwin soils**

*Percentage of map unit:* 4 percent

*Landform:* Convex areas on side slopes of canyons

#### **Joel soils**

*Percentage of map unit:* 4 percent

*Landform:* Benches in canyons

#### **Rock outcrop**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas on side slopes of canyons

## ***118—Jacot-Garveson complex, 15 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 2,200 to 4,400 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Jacot and similar soils:* 45 percent

*Garveson and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Jacot**

#### **Setting**

*Landform:* Hills

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* West to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western hemlock/queencup beadlily (CN570)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 6 inches; ashy silt loam

Bw—6 to 16 inches; ashy silt loam

2Bt—16 to 42 inches; gravelly sandy loam

2C1—42 to 50 inches; gravelly loamy sand

2C2—50 to 62 inches; very gravelly loamy sand

### **Characteristics of Garveson**

#### **Setting**

*Landform:* Hills

*Geomorphic position (two-dimensional):* Shoulders

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* Southeast to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss



## Soil Survey of Clearwater Area, Idaho

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western hemlock/queencup beadrily (CN570)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 18 inches; ashy silt loam

2BC—18 to 25 inches; very gravelly loamy coarse sand

2C—25 to 62 inches; very gravelly coarse sand

### ***Dissimilar Minor Components***

#### **Boulder creek soils**

*Percentage of map unit:* 4 percent

*Landform:* Sharp, convex mountain slopes

#### **Keeler soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Kruse soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Nakarna soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Threebear soils**

*Percentage of map unit:* 4 percent

*Landform:* Terraces, footslopes, and toeslopes of hills

## **119—Jacot-Garveson complex, 35 to 65 percent slopes**

### ***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,200 to 4,400 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Jacot and similar soils:* 45 percent

*Garveson and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Jacot**

#### **Setting**

*Landform:* Hills

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* West to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/queencup beadrily (CN570)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 6 inches; ashy silt loam

Bw—6 to 16 inches; ashy silt loam

2Bt—16 to 42 inches; gravelly sandy loam

2C1—42 to 50 inches; gravelly loamy sand

2C2—50 to 62 inches; very gravelly loamy sand

### **Characteristics of Garveson**

#### **Setting**

*Landform:* Hills

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* Southeast to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 10 to 20 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

## Soil Survey of Clearwater Area, Idaho

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/queencup beadrily (CN570)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 18 inches; ashy silt loam

2BC—18 to 25 inches; very gravelly loamy coarse sand

2C—25 to 62 inches; very gravelly coarse sand

### ***Dissimilar Minor Components***

#### **Boulder creek soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Keeler soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Kruse soils**

*Percentage of map unit:* 4 percent

*Landform:* Ridges, mountain slopes

#### **Marble creek soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Nakarna soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

## **120—Jaype-Revling complex, 5 to 40 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,550 feet

*Mean annual precipitation:* 35 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Jaype and similar soils:* 50 percent

*Revling and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Jaype**

#### **Setting**

*Landform:* Hillslopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits  
*Slope range:* 5 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 15.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 5 inches; ashy silt loam  
Bw—5 to 14 inches; ashy silt loam  
2Bt—14 to 26 inches; loam  
3Btb—26 to 72 inches; silty clay loam  
3C—72 to 82 inches; sandy loam

### **Characteristics of Revling**

#### **Setting**

*Landform:* Hillslopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits  
*Slope range:* 5 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 14.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 21 inches; ashy silt loam

2Bt—21 to 35 inches; sandy clay loam

3Btb—35 to 86 inches; sandy clay loam

***Dissimilar Minor Components***

**Konkol soils**

*Percentage of map unit:* 7 percent

*Landform:* Hills on plateaus

**Grangemont soils**

*Percentage of map unit:* 5 percent

*Landform:* Ridges, hillslopes

**Riswold soils**

*Percentage of map unit:* 3 percent

*Landform:* Broad, concave hillslopes on plateaus

**121—Jaype-Revling complex, dry, 5 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,550 feet

*Mean annual precipitation:* 35 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Jaype, dry, and similar soils:* 65 percent

*Revling, dry, and similar soils:* 15 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Jaype, Dry***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits

*Slope range:* 5 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

## Soil Survey of Clearwater Area, Idaho

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 15.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; ashy silt loam

Bw—5 to 14 inches; ashy silt loam

2Bt—14 to 26 inches; loam

3Btb—26 to 72 inches; silty clay loam

3C—72 to 82 inches; sandy loam

## ***Characteristics of Revling, Dry***

### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits

*Slope range:* 5 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 14.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 21 inches; ashy silt loam

2Bt—21 to 35 inches; sandy clay loam

3Btb—35 to 86 inches; sandy clay loam

## ***Dissimilar Minor Components***

### **Konkol soils, warm**

*Percentage of map unit:* 10 percent

*Landform:* Low-relief ridges; sharp, convex hillslopes on plateaus

**Jaype soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex hillslopes

**Tomodo soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Ridges

**122—Jaype-Statemeadow complex, 10 to 45 percent slopes**

**Map Unit Setting**

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,200 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

**Map Unit Composition**

*Jaype and similar soils:* 50 percent

*Statemeadow and similar soils:* 25 percent

*Dissimilar minor components:* 25 percent

**Characteristics of Jaype**

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits

*Slope range:* 10 to 45 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 15.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; ashy silt loam

Bw—5 to 14 inches; ashy silt loam



2Bt—14 to 26 inches; loam  
3Btb—26 to 72 inches; silty clay loam  
3C—72 to 82 inches; sandy loam

### ***Characteristics of Statemeadow***

#### **Setting**

*Landform:* Hillslopes  
*Downslope shape:* Concave  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and loess over colluvium derived from basalt  
*Slope range:* 10 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 2 inches; ashy silt loam  
Bw—2 to 9 inches; ashy silt loam  
Bt1—9 to 51 inches; silt loam  
2Bt2—51 to 61 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Konkol soils**

*Percentage of map unit:* 13 percent  
*Landform:* Hills on plateaus

#### **Statemeadow soils, moist**

*Percentage of map unit:* 5 percent  
*Landform:* Hillslopes on plateaus

#### **Judgetown soils**

*Percentage of map unit:* 3 percent  
*Landform:* Footslopes of mountains

#### **Elkridge soils**

*Percentage of map unit:* 2 percent  
*Landform:* Steep, convex hillslopes

#### **Teneb soils**

*Percentage of map unit:* 2 percent  
*Landform:* Drainageways

## **123—Joel-Setters complex, 5 to 20 percent slopes**

### **Map Unit Setting**

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,200 to 2,800 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Joel and similar soils:* 50 percent

*Setters and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Joel**

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 16 inches; silt loam

BA—16 to 27 inches; silt loam

B/E—27 to 40 inches; silty clay loam

Btb—40 to 61 inches; silty clay loam

### **Characteristics of Setters**

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Convex

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* 8 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 13 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/common snowberry (CN310)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; silt loam

Bt—15 to 28 inches; silt loam

E—28 to 34 inches; silt loam

Btb—34 to 62 inches; silty clay

***Dissimilar Minor Components***

**Taney soils, dry**

*Percentage of map unit:* 7 percent

*Landform:* Structural benches, broad ridges on hillslopes

**Agatha soils**

*Percentage of map unit:* 5 percent

*Landform:* Side slopes of canyons

**Klickson soils**

*Percentage of map unit:* 5 percent

*Landform:* Escarpments on hillslopes

**Longpen soils, dry**

*Percentage of map unit:* 3 percent

*Landform:* Near draws on benches in canyons

**124—Johnson loam, 45 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 3,000 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Johnson and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

### ***Characteristics of Johnson***

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium over residuum derived from gneiss and/or granite

*Slope range:* 45 to 65 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; loam

Bt1—12 to 22 inches; loam

Bt2—22 to 54 inches; clay loam

Cr—54 to 64 inches; weathered bedrock

### ***Dissimilar Minor Components***

#### **Cavendish soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches

#### **Klickson soils**

*Percentage of map unit:* 5 percent

*Landform:* Near crests of canyons

#### **Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes of canyons

#### **Uvi soils**

*Percentage of map unit:* 5 percent

*Landform:* Dissected mountain slopes

## ***125—Johnson-Swayne complex, 20 to 40 percent slopes***

### ***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 1,000 to 3,000 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Johnson and similar soils:* 55 percent

*Swayne and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Johnson**

#### **Setting**

*Landform:* Structural benches, canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium over residuum derived from gneiss and/or granite

*Slope range:* 20 to 40 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; loam

Bt1—12 to 22 inches; loam

Bt2—22 to 54 inches; clay loam

Cr—54 to 64 inches; weathered bedrock

### **Characteristics of Swayne**

#### **Setting**

*Landform:* Structural benches on canyons

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or alluvium derived from granite

*Slope range:* 20 to 40 percent

*Depth to restrictive feature:* 14 to 60 inches to an abrupt textural change

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Douglas-fir/ninebark (CN260)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; silt loam

BA—8 to 14 inches; silty clay loam

B/E—14 to 22 inches; silty clay loam

Bt1—22 to 56 inches; silty clay loam

2Bt2—56 to 61 inches; clay loam

***Dissimilar Minor Components***

**Ahsahka soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave side slopes of canyons

**Driscoll soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches in canyons

**Fordcreek soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Benches in canyons

**Texascreek soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Shoulders in canyons

**126—Johnson-Swayne complex, 40 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,400 to 3,000 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Johnson and similar soils:* 45 percent

*Swayne and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Johnson***

**Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Loess and/or colluvium over residuum derived from gneiss and/or granite

*Slope range:* 45 to 75 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Douglas-fir/ninebark (CN260)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; loam

Bt1—12 to 22 inches; loam

Bt2—22 to 54 inches; clay loam

Cr—54 to 64 inches; weathered bedrock

## ***Characteristics of Swayne***

### **Setting**

*Landform:* Canyons

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Loess and/or alluvium derived from granite

*Slope range:* 40 to 55 percent

*Depth to restrictive feature:* 14 to 60 inches to an abrupt textural change

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Douglas-fir/ninebark (CN260)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; silt loam

BA—8 to 14 inches; silty clay loam



B/E—14 to 22 inches; silty clay loam  
Bt1—22 to 56 inches; silty clay loam  
2Bt2—56 to 61 inches; clay loam

***Dissimilar Minor Components***

**Ahsahka soils**

*Percentage of map unit:* 6 percent  
*Landform:* Benches

**Texascreek soils, moist**

*Percentage of map unit:* 5 percent  
*Landform:* Convex side slopes of canyons

**Klickson soils**

*Percentage of map unit:* 4 percent  
*Landform:* Side slopes of canyons

**127—Johnson-Texascreek complex, 35 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,000 to 3,000 feet  
*Mean annual precipitation:* 24 to 26 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Johnson and similar soils:* 50 percent  
*Texascreek and similar soils:* 35 percent  
*Dissimilar minor components:* 15 percent

***Characteristics of Johnson***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium over residuum derived from gneiss and/or granite  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Douglas-fir/ninebark (CN260)*

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 12 inches; loam

Bt1—12 to 22 inches; loam

Bt2—22 to 54 inches; clay loam

Cr—54 to 64 inches; weathered bedrock

***Characteristics of Texascreek***

**Setting**

*Landform: Canyons*

*Downslope shape: Convex*

*Across-slope shape: Convex*

*Aspect (representative): Northwest*

*Aspect (range): Southwest to northeast (clockwise)*

**Properties and qualities**

*Parent material: Loess over residuum derived from gneiss, granite, and/or schist*

*Slope range: 35 to 75 percent*

*Depth to restrictive feature: 20 to 40 inches to paralithic bedrock*

*Drainage class: Well drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: None*

*Ponding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Salinity (maximum): Not saline*

*Sodicity (maximum): Not sodic*

*Available water capacity (entire profile): Low (about 5 inches)*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Douglas-fir/common snowberry (CN310)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 13 inches; loam

Bw—13 to 25 inches; gravelly loam

C—25 to 33 inches; gravelly sandy loam

Cr—33 to 43 inches; weathered bedrock

***Dissimilar Minor Components***

**Ahsahka soils, moist**

*Percentage of map unit: 5 percent*

*Landform: Convex side slopes of canyons*

**Rock outcrop**

*Percentage of map unit: 5 percent*

*Landform: Convex areas on side slopes of canyons*

**Whiskeycreek soils**

*Percentage of map unit: 5 percent*

*Landform: Canyons*

## **128—Jury medial silt loam, 10 to 30 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,200 to 5,000 feet

*Mean annual precipitation:* 45 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Jury and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Jury**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 10 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 29 inches; medial silt loam

2Bw2—29 to 48 inches; sandy loam

2C—48 to 62 inches; loamy sand

### **Dissimilar Minor Components**

#### **Jury soils, high elevation**

*Percentage of map unit:* 10 percent

*Landform:* Ridges, smooth and convex mountain slopes

#### **Boulder creek soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

**Weitas soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes

**129—Jury medial silt loam, 30 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,000 to 4,600 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Jury and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Jury***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 30 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 29 inches; medial silt loam

2Bw2—29 to 48 inches; sandy loam

2C—48 to 62 inches; loamy sand

***Dissimilar Minor Components***

**Brodeer soils**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes

**Dullaxe soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes, ridges

**Jury soils, high elevation**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

**130—Jury medial silt loam, cold, 30 to 65 percent slopes**

**Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,800 to 4,500 feet

*Mean annual precipitation:* 45 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

**Map Unit Composition**

*Jury, cold, and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

**Characteristics of Jury, Cold**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 30 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/wild ginger (CN516)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 29 inches; medial silt loam

2Bw2—29 to 48 inches; sandy loam

2C—48 to 62 inches; loamy sand

***Dissimilar Minor Components***

**Dullaxe soils**

*Percentage of map unit:* 7 percent

*Landform:* Ridges

**Bouldercreek soils, moist**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

**131—Jury-Weitas complex, 25 to 60 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,000 to 5,100 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Jury and similar soils:* 55 percent

*Weitas and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Jury***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 25 to 60 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 29 inches; medial silt loam

2Bw2—29 to 48 inches; sandy loam

2C—48 to 62 inches; loamy sand

### ***Characteristics of Weitas***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loamy colluvium derived from granite and/or metamorphic rock  
*Slope range:* 25 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.9 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Sitka alder/miner's lettuce (CN001)

#### **Typical profile**

A—0 to 14 inches; medial loam  
Bw1—14 to 22 inches; medial loam  
2Bw2—22 to 37 inches; gravelly loam  
2C1—37 to 43 inches; gravelly loamy sand  
3C2—43 to 60 inches; very gravelly loam

### ***Dissimilar Minor Components***

#### **Lostpete soils**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

#### **Boulder creek soils, moist**

*Percentage of map unit:* 3 percent  
*Landform:* Smooth and concave mountain slopes

#### **Judgetown soils**

*Percentage of map unit:* 2 percent  
*Landform:* Sharp, convex mountain slopes

## ***132—Jury-Weitas complex, 5 to 25 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 4,200 to 5,200 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 38 to 41 degrees F  
*Frost-free period:* 50 to 110 days



### **Map Unit Composition**

*Jury and similar soils:* 60 percent

*Weitas and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Jury**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 5 to 25 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 29 inches; medial silt loam

2Bw2—29 to 48 inches; sandy loam

2C—48 to 62 inches; loamy sand

### **Characteristics of Weitas**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loamy colluvium derived from granite and/or metamorphic rock

*Slope range:* 5 to 25 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Sitka alder/miner's lettuce (CN001)

**Typical profile**

A—0 to 14 inches; medial loam

Bw1—14 to 22 inches; medial loam

2Bw2—22 to 37 inches; gravelly loam

2C1—37 to 43 inches; gravelly loamy sand

3C2—43 to 60 inches; very gravelly loam

***Dissimilar Minor Components***

**Judgetown soils, cool**

*Percentage of map unit:* 4 percent

*Landform:* Smooth mountain slopes

**Marblecreek soils, moist**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**Poorman soils, wet**

*Percentage of map unit:* 1 percent

*Landform:* Convex mountain slopes

**133—Kauder ashy silt loam, 5 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,700 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Kauder and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Kauder***

**Setting**

*Landform:* Hillslopes, ridges

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 20 percent

## Soil Survey of Clearwater Area, Idaho

*Depth to restrictive feature:* 22 to 40 inches to a fragipan  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* About 13 to 28 inches (see Water Features table)  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw—4 to 15 inches; ashy silt loam  
2E—15 to 23 inches; silt loam  
2B/E—23 to 34 inches; silt loam  
3Btx—34 to 95 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Grangemont soils**

*Percentage of map unit:* 8 percent  
*Landform:* Smooth and concave hillslopes

#### **Carlinton soils**

*Percentage of map unit:* 3 percent  
*Landform:* Ridges

#### **Kauder soils, dry**

*Percentage of map unit:* 3 percent  
*Landform:* Convex slopes on broad ridges, convex hillslopes on plateaus

#### **Kruse soils**

*Percentage of map unit:* 3 percent  
*Landform:* Knobs on undulating hillslopes

#### **Riswold soils**

*Percentage of map unit:* 3 percent  
*Landform:* Hillslopes on plateaus

### ***134—Keeler, dry-Keeler complex, 35 to 70 percent slopes***

#### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 3,800 feet  
*Mean annual precipitation:* 30 to 40 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Keeler, dry, and similar soils:* 50 percent

*Keeler and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Keeler, Dry**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam

2Bt2—39 to 48 inches; gravelly sandy loam

2C—48 to 74 inches; gravelly sandy loam

### **Characteristics of Keeler**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

## Soil Survey of Clearwater Area, Idaho

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam

2Bt2—39 to 48 inches; gravelly sandy loam

2C—48 to 74 inches; gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Brodeer soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes

#### **Marblecreek soils**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

#### **Poorman soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

#### **Reggear soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Footslopes or benches on mountain slopes

## **135—Keeler, moist-Keeler complex, 35 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 4,200 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Keeler, moist, and similar soils:* 65 percent

*Keeler and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### ***Characteristics of Keeler, Moist***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam

2Bt2—39 to 48 inches; gravelly sandy loam

2C—48 to 74 inches; gravelly sandy loam

## ***Characteristics of Keeler***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam  
2Bt2—39 to 48 inches; gravelly sandy loam  
2C—48 to 74 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Mushel soils, wet**

*Percentage of map unit:* 5 percent  
*Landform:* Concave mountain slopes

**Mushel soils**

*Percentage of map unit:* 5 percent  
*Landform:* Convex mountain slopes

**Aldermant soils**

*Percentage of map unit:* 3 percent  
*Landform:* Mountain slopes

**Hugus soils, high precipitation**

*Percentage of map unit:* 2 percent  
*Landform:* Sharp, convex mountain slopes

***136—Keeler-Aldermant complex, 35 to 70 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 4,600 feet  
*Mean annual precipitation:* 40 to 60 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Keeler and similar soils:* 55 percent  
*Aldermant and similar soils:* 30 percent  
*Dissimilar minor components:* 15 percent

***Characteristics of Keeler***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite  
*Slope range:* 35 to 50 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.1 inches)



**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/queencup beadlily (CN530)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam

2Bt2—39 to 48 inches; gravelly sandy loam

2C—48 to 74 inches; gravelly sandy loam

***Characteristics of Aldermand***

**Setting**

*Landform: Mountain slopes*

*Downslope shape: Concave*

*Across-slope shape: Concave*

*Aspect (representative): Northwest*

*Aspect (range): Southwest to northeast (clockwise)*

**Properties and qualities**

*Parent material: Volcanic ash and/or alluvium derived from granite and/or metamorphic rock*

*Slope range: 40 to 70 percent*

*Depth to restrictive feature: 20 to 55 inches to strongly contrasting textural stratification*

*Drainage class: Well drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: None*

*Ponding frequency: None*

*Seasonal high water table (minimum depth): More than 72 inches*

*Salinity (maximum): Not saline*

*Sodicity (maximum): Not sodic*

*Available water capacity (entire profile): Moderate (about 7.1 inches)*

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Western redcedar/queencup beadlily (CN530)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 17 inches; ashy loam

2Bw2—17 to 25 inches; sandy loam

2BC—25 to 33 inches; sandy loam

2C1—33 to 44 inches; gravelly sandy loam

2C2—44 to 62 inches; very stony loamy sand

***Dissimilar Minor Components***

**Boulder creek soils**

*Percentage of map unit: 10 percent*

*Landform: Mountain slopes*

**Mushel soils**

*Percentage of map unit: 5 percent*

*Landform: Mountain slopes*

## **137—Keeler-Jacot complex, 30 to 55 percent slopes**

### **Map Unit Setting**

*General landscape:* Foothills  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,600 to 3,400 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Keeler and similar soils:* 50 percent  
*Jacot and similar soils:* 30 percent  
*Dissimilar minor components:* 20 percent

### **Characteristics of Keeler**

#### **Setting**

*Landform:* Hills  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northeast  
*Aspect (range):* Northwest to east (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite  
*Slope range:* 30 to 55 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western hemlock/queencup beadrily (CN570)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 7 inches; ashy silt loam  
BA—7 to 18 inches; ashy silt loam  
Bt1—18 to 38 inches; loam  
2Bt2—38 to 62 inches; sandy loam

### **Characteristics of Jacot**

#### **Setting**

*Landform:* Hills  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Southeast  
*Aspect (range):* Northeast to south (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 30 to 55 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/queencup beadrily (CN570)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 6 inches; ashy silt loam

Bw—6 to 16 inches; ashy silt loam

2Bt—16 to 42 inches; gravelly sandy loam

2C1—42 to 50 inches; gravelly loamy sand

2C2—50 to 62 inches; very gravelly loamy sand

***Dissimilar Minor Components***

**Garveson soils**

*Percentage of map unit:* 6 percent

*Landform:* Hills

**Kruse soils**

*Percentage of map unit:* 5 percent

*Landform:* Ridges, mountain slopes

**Nakarna soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Threebear soils**

*Percentage of map unit:* 4 percent

*Landform:* Terraces, hills

**138—Keeler-Lado complex, 10 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,700 to 3,500 feet

*Mean annual precipitation:* 38 to 42 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Keeler and similar soils:* 55 percent

*Lado and similar soils:* 20 percent

*Dissimilar minor components:* 25 percent

### ***Characteristics of Keeler***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite  
*Slope range:* 10 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 5 inches; ashy loam  
BA—5 to 12 inches; ashy loam  
Bt1—12 to 39 inches; loam  
2Bt2—39 to 48 inches; gravelly sandy loam  
2C—48 to 74 inches; gravelly sandy loam

### ***Characteristics of Lado***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or metamorphic rock  
*Slope range:* 10 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; medial silt loam

Bw—4 to 20 inches; medial silt loam

2Bt—20 to 48 inches; clay loam

3Bt—48 to 64 inches; loam

***Dissimilar Minor Components***

**Kauder soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Concave and smooth footslopes of ridges, hillslopes on plateaus

**Floodwood soils, low precipitation**

*Percentage of map unit:* 6 percent

*Landform:* Smooth mountain slopes

**Mushel soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

**Boulder creek soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**Judgetown soils**

*Percentage of map unit:* 2 percent

*Landform:* Sharp, convex mountain slopes

**139—Kettenbach-Gwin-Rock outcrop complex, 45 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,800 to 3,000 feet

*Mean annual precipitation:* 22 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Kettenbach and similar soils:* 40 percent

*Gwin and similar soils:* 35 percent

*Rock outcrop:* 15 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Kettenbach***

**Setting**

*Landform:* Canyons

*Downslope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Loess and colluvium derived from basalt  
*Slope range:* 45 to 75 percent  
*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Low (about 3.5 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 8e  
*Ecological site:* SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)

### Typical profile

A—0 to 3 inches; gravelly silt loam  
AB—3 to 11 inches; very gravelly silt loam  
Bt—11 to 36 inches; very cobbly silty clay loam  
R—36 to 46 inches; unweathered bedrock

## Characteristics of Gwin

### Setting

*Landform:* Canyons  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Loess and/or colluvium over bedrock derived from greenstone and/or basalt  
*Slope range:* 45 to 75 percent  
*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very low (about 1.4 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 8e  
*Ecological site:* SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE (R009XY026ID)

### Typical profile

A1—0 to 4 inches; cobbly silt loam  
A2—4 to 8 inches; very gravelly silt loam

Bt—8 to 13 inches; very gravelly silty clay loam

R—13 to 23 inches; unweathered bedrock

### ***Characteristics of Rock Outcrop***

*Description of areas:* Exposures of bare bedrock

### ***Dissimilar Minor Components***

#### **Keuterville soils**

*Percentage of map unit:* 8 percent

*Landform:* Draws in canyons

#### **Klickson soils**

*Percentage of map unit:* 2 percent

*Landform:* Canyons

## ***140—Kettenbach-Keuterville association, 35 to 75 percent slopes***

### ***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 3,000 feet

*Mean annual precipitation:* 22 to 24 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### ***Map Unit Composition***

*Kettenbach and similar soils:* 45 percent

*Keuterville and similar soils:* 30 percent

*Dissimilar minor components:* 25 percent

### ***Characteristics of Kettenbach***

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and colluvium derived from basalt

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 3.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)



**Typical profile**

A—0 to 3 inches; gravelly silt loam  
AB—3 to 11 inches; very gravelly silt loam  
Bt—11 to 36 inches; very cobbly silty clay loam  
R—36 to 46 inches; unweathered bedrock

***Characteristics of Keuterville***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 6.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A1—2 to 11 inches; gravelly silt loam  
A2—11 to 21 inches; very gravelly silt loam  
Bt1—21 to 52 inches; very gravelly silty clay loam  
Bt2—52 to 64 inches; extremely cobbly silty clay loam

***Dissimilar Minor Components***

**Gwin soils**

*Percentage of map unit:* 12 percent  
*Landform:* Canyons

**Rock outcrop**

*Percentage of map unit:* 6 percent  
*Landform:* Ridges

**Jacket soils**

*Percentage of map unit:* 5 percent  
*Landform:* Benches in canyons

**Klickson soils**

*Percentage of map unit:* 2 percent  
*Landform:* Draws in canyons

## **141—Keuterville gravelly silt loam, 10 to 25 percent slopes**

### **Map Unit Setting**

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,800 to 3,000 feet

*Mean annual precipitation:* 22 to 26 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Keuterville and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Keuterville**

#### **Setting**

*Landform:* Canyons

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 10 to 25 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.7 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 11 inches; gravelly silt loam

A2—11 to 21 inches; very gravelly silt loam

Bt1—21 to 52 inches; very gravelly silty clay loam

Bt2—52 to 64 inches; extremely cobbly silty clay loam

### **Dissimilar Minor Components**

#### **Kettenbach soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex side slopes of canyons

**Klickson soils**

*Percentage of map unit:* 5 percent

*Landform:* Canyons

**Meland soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches in canyons

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes of canyons

**142—Keuterville gravelly silt loam, 25 to 50 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,800 to 3,200 feet

*Mean annual precipitation:* 22 to 28 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Keuterville and similar soils:* 65 percent

*Dissimilar minor components:* 35 percent

***Characteristics of Keuterville***

**Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 25 to 50 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 11 inches; gravelly silt loam

A2—11 to 21 inches; very gravelly silt loam

Bt1—21 to 52 inches; very gravelly silty clay loam

Bt2—52 to 64 inches; extremely gravelly silty clay loam

***Dissimilar Minor Components***

**Wellsbench soils**

*Percentage of map unit:* 12 percent

*Landform:* Benches in canyons, canyons

**Rock outcrop**

*Percentage of map unit:* 10 percent

*Landform:* Convex areas on side slopes of canyons

**Gwin soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex side slopes of canyons

**Larkin soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches in canyons

**Klickson soils**

*Percentage of map unit:* 3 percent

*Landform:* Concave side slopes of canyons

***143—Keuterville-Rock outcrop complex, 35 to 90 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,200 to 4,200 feet

*Mean annual precipitation:* 20 to 26 inches

*Mean annual air temperature:* 45 to 50 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Keuterville and similar soils:* 65 percent

*Rock outcrop:* 20 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Keuterville***

**Setting**

*Landform:* Canyons

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 35 to 90 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

A—0 to 13 inches; gravelly silt loam

Bt1—13 to 49 inches; very gravelly silty clay loam

Bt2—49 to 61 inches; very cobbly silty clay loam

***Characteristics of Rock Outcrop***

*Description of areas:* Exposures of bare bedrock

***Dissimilar Minor Components***

**Kettenbach soils**

*Percentage of map unit:* 10 percent

*Landform:* Side slopes of canyons

**Gwin soils**

*Percentage of map unit:* 5 percent

*Landform:* Side slopes of canyons

***144—Klickson ashy silt loam, 15 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 3,300 feet

*Mean annual precipitation:* 24 to 32 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Klickson and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Klickson***

**Setting**

*Landform:* Canyons

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess, alluvium, and/or colluvium derived from basalt

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 30 to 50 inches to an abrupt textural change

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Douglas-fir/ninebark (CN260)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 15 inches; ashy silt loam  
AB—15 to 21 inches; gravelly silt loam  
Bt1—21 to 35 inches; gravelly silty clay loam  
Bt2—35 to 62 inches; very gravelly silty clay loam

***Dissimilar Minor Components***

**Agatha soils**

*Percentage of map unit:* 8 percent  
*Landform:* Concave side slopes of canyons

**Joel soils**

*Percentage of map unit:* 6 percent  
*Landform:* Benches in canyons

**Rock outcrop**

*Percentage of map unit:* 1 percent  
*Landform:* Convex areas on side slopes of canyons

***145—Klickson ashy silt loam, 35 to 90 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,050 to 3,200 feet  
*Mean annual precipitation:* 24 to 32 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Klickson and similar soils:* 70 percent  
*Dissimilar minor components:* 30 percent

***Characteristics of Klickson***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess, alluvium, and/or colluvium derived from basalt  
*Slope range:* 35 to 90 percent  
*Depth to restrictive feature:* 30 to 50 inches to an abrupt textural change  
*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; ashy silt loam

AB—15 to 21 inches; gravelly silt loam

Bt1—21 to 35 inches; gravelly silty clay loam

Bt2—35 to 62 inches; very gravelly silty clay loam

### ***Dissimilar Minor Components***

#### **Agatha soils**

*Percentage of map unit:* 10 percent

*Landform:* Concave side slopes of canyons

#### **Kettenbach soils**

*Percentage of map unit:* 6 percent

*Landform:* Convex side slopes of canyons

#### **Joel soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches in canyons

#### **Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes of canyons

#### **Keuterville soils**

*Percentage of map unit:* 4 percent

*Landform:* Concave side slopes of canyons

## ***146—Klickson-Agatha association, 35 to 75 percent slopes***

### ***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,100 to 3,200 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### ***Map Unit Composition***

*Klickson and similar soils:* 50 percent

*Agatha and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent



### ***Characteristics of Klickson***

#### **Setting**

*Landform:* Rims, canyons  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess, alluvium, and/or colluvium derived from basalt  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* 30 to 50 inches to an abrupt textural change  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 15 inches; ashy silt loam  
AB—15 to 21 inches; gravelly silt loam  
Bt1—21 to 35 inches; gravelly silty clay loam  
Bt2—35 to 62 inches; very gravelly silty clay loam

### ***Characteristics of Agatha***

#### **Setting**

*Landform:* Rims, canyons  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oa—1 to 2 inches; highly decomposed plant material  
A—2 to 5 inches; ashy silt loam  
AB—5 to 9 inches; gravelly ashy silt loam  
Bt1—9 to 20 inches; very gravelly silt loam  
Bt2—20 to 60 inches; extremely cobbly silty clay loam  
R—60 to 70 inches; unweathered bedrock

***Dissimilar Minor Components***

**Cavendish soils, dry**

*Percentage of map unit:* 14 percent  
*Landform:* Escarpments

**Rock outcrop**

*Percentage of map unit:* 1 percent  
*Landform:* Convex areas on side slopes of canyons

**147—Klickson-Kettenbach association, 35 to 90 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,400 to 3,200 feet  
*Mean annual precipitation:* 24 to 32 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Klickson and similar soils:* 50 percent  
*Kettenbach and similar soils:* 30 percent  
*Dissimilar minor components:* 20 percent

***Characteristics of Klickson***

**Setting**

*Landform:* Rims, canyons  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess, alluvium, and/or colluvium derived from basalt  
*Slope range:* 35 to 90 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Douglas-fir/ninebark (CN260)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; ashy silt loam

AB—15 to 21 inches; gravelly silt loam

Bt1—21 to 35 inches; gravelly silty clay loam

Bt2—35 to 62 inches; very gravelly silty clay loam

***Characteristics of Kettenbach***

**Setting**

*Landform:* Rims, canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and colluvium derived from basalt

*Slope range:* 35 to 90 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 3.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Ecological site:* SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)

**Typical profile**

A—0 to 3 inches; gravelly silt loam

AB—3 to 11 inches; very gravelly silt loam

Bt—11 to 36 inches; very cobbly silty clay loam

R—36 to 46 inches; unweathered bedrock

***Dissimilar Minor Components***

**Joel soils**

*Percentage of map unit:* 7 percent

*Landform:* Benches in canyons

**Gwin soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex side slopes of canyons

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes of canyons

**Keuterville soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex side slopes of canyons

## **148—Klickson-Rock outcrop-Kettenbach complex, 45 to 90 percent slopes**

### **Map Unit Setting**

*General landscape:* Canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,100 to 3,300 feet  
*Mean annual precipitation:* 24 to 32 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Klickson and similar soils:* 50 percent  
*Rock outcrop:* 20 percent  
*Kettenbach and similar soils:* 15 percent  
*Dissimilar minor components:* 15 percent

### **Characteristics of Klickson**

#### **Setting**

*Landform:* Canyons  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess, alluvium, and/or colluvium derived from basalt  
*Slope range:* 45 to 90 percent  
*Depth to restrictive feature:* 30 to 50 inches to an abrupt textural change  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e  
*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 15 inches; ashy silt loam  
AB—15 to 21 inches; gravelly silt loam  
Bt1—21 to 35 inches; gravelly silty clay loam  
Bt2—35 to 62 inches; very gravelly silty clay loam

### **Characteristics of Rock Outcrop**

*Description of areas:* Exposures of bare bedrock

### **Characteristics of Kettenbach**

#### **Setting**

*Landform:* Canyons  
*Downslope shape:* Convex

*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and colluvium derived from basalt  
*Slope range:* 45 to 90 percent  
*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Low (about 3.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e  
*Ecological site:* SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)

**Typical profile**

A—0 to 3 inches; gravelly silt loam  
AB—3 to 11 inches; very gravelly silt loam  
Bt—11 to 36 inches; very cobbly silty clay loam  
R—36 to 46 inches; unweathered bedrock

***Dissimilar Minor Components***

**Agatha soils**

*Percentage of map unit:* 5 percent  
*Landform:* Concave side slopes of canyons

**Gwin soils**

*Percentage of map unit:* 5 percent  
*Landform:* Convex side slopes of canyons

**Keuterville soils**

*Percentage of map unit:* 5 percent  
*Landform:* Convex side slopes of canyons

**149—Konkol-Revling complex, 5 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,100 to 3,500 feet  
*Mean annual precipitation:* 35 to 55 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Konkol and similar soils:* 45 percent  
*Revling and similar soils:* 25 percent  
*Dissimilar minor components:* 30 percent

### ***Characteristics of Konkol***

#### **Setting**

*Landform:* Hillslopes, ridges  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits  
*Slope range:* 5 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.4 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oe—0 to 2 inches; moderately decomposed plant material  
A—2 to 3 inches; ashy silt loam  
Bw—3 to 10 inches; ashy silt loam  
2Bt1—10 to 18 inches; gravelly loam  
2EB—18 to 25 inches; very fine sandy loam  
2Bt2—25 to 48 inches; silt loam  
2Bt3—48 to 56 inches; sandy clay loam  
2Bt4—56 to 64 inches; very fine sandy loam

### ***Characteristics of Revling***

#### **Setting**

*Landform:* Hillslopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits  
*Slope range:* 5 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 14.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 21 inches; ashy silt loam

2Bt—21 to 35 inches; sandy clay loam

3Btb—35 to 86 inches; sandy clay loam

***Dissimilar Minor Components***

**Jaype soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches on hillslopes

**Elkberry soils**

*Percentage of map unit:* 6 percent

*Landform:* Footslopes of hills

**Spacecreek soils, dry**

*Percentage of map unit:* 6 percent

*Landform:* Stream terraces

**Riswold soils**

*Percentage of map unit:* 4 percent

*Landform:* Concave hillslopes on plateaus

**Scaler soils, wet**

*Percentage of map unit:* 2 percent

*Landform:* Hillslopes

**Teneb soils**

*Percentage of map unit:* 2 percent

*Landform:* Drainageways

**150—Kooskia silt loam, 10 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,400 to 3,080 feet

*Mean annual precipitation:* 25 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Kooskia and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Kooskia***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear



## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 10 to 20 percent

*Depth to restrictive feature:* 6 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 7 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/ninebark (CN260)

### **Typical profile**

Ap—0 to 7 inches; silt loam

AB—7 to 11 inches; silt loam

E—11 to 20 inches; silt loam

Btb—20 to 67 inches; silty clay

## ***Dissimilar Minor Components***

### **Jacket soils**

*Percentage of map unit:* 7 percent

*Landform:* Benches in canyons

### **Southwick soils**

*Percentage of map unit:* 4 percent

*Landform:* Hills on plateaus

### **Wilkins soils**

*Percentage of map unit:* 3 percent

*Landform:* Drainageways

### **Joel soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills on plateaus

### **Setters soils**

*Percentage of map unit:* 2 percent

*Landform:* Smooth hillslopes

### **Cavendish soils**

*Percentage of map unit:* 1 percent

*Landform:* Ridges and hills on plateaus

### **Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of hillslopes

## **151—Kooskia silt loam, 3 to 10 percent slopes**

### **Map Unit Setting**

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,250 to 3,160 feet

*Mean annual precipitation:* 23 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Kooskia and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Kooskia**

#### **Setting**

*Landform:* Hillslopes, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 3 to 10 percent

*Depth to restrictive feature:* 6 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 7 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Ap—0 to 7 inches; silt loam

AB—7 to 11 inches; silt loam

E—11 to 20 inches; silt loam

Btb—20 to 67 inches; silty clay

### **Dissimilar Minor Components**

#### **Jacket soils**

*Percentage of map unit:* 6 percent

*Landform:* Smooth hillslopes on plateaus

#### **Wilkins soils**

*Percentage of map unit:* 5 percent

*Landform:* Drainageways

**Taney soils**

*Percentage of map unit:* 4 percent

*Landform:* Benches on hillslopes

**Cavendish soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills on plateaus

**Driscoll soils**

*Percentage of map unit:* 2 percent

*Landform:* Benches in canyons, hills on plateaus

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of hillslopes

**152—Kruse ashy loam, 20 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,200 to 3,440 feet

*Mean annual precipitation:* 25 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Kruse and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Kruse***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over mixed colluvium

*Slope range:* 20 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 17 inches; ashy loam  
Bt—17 to 50 inches; clay loam  
BC—50 to 66 inches; coarse sandy loam

***Dissimilar Minor Components***

**Johnson soils**

*Percentage of map unit:* 10 percent  
*Landform:* Side slopes of canyons, hills on plateaus

**Agatha soils**

*Percentage of map unit:* 5 percent  
*Landform:* Side slopes of canyons

**153—Kruse ashy loam, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 3,600 feet  
*Mean annual precipitation:* 25 to 40 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Kruse and similar soils:* 75 percent  
*Dissimilar minor components:* 25 percent

***Characteristics of Kruse***

**Setting**

*Landform:* Canyons  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over mixed colluvium  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 6 inches; ashy loam  
BA—6 to 14 inches; ashy loam  
Bt—14 to 41 inches; clay loam  
2BC—41 to 48 inches; sandy loam  
2C—48 to 61 inches; loamy sand

***Dissimilar Minor Components***

**Uvi soils**

*Percentage of map unit:* 13 percent  
*Landform:* Smooth and convex mountain slopes

**Brequito soils, dry**

*Percentage of map unit:* 10 percent  
*Landform:* Concave draws on mountain slopes

**Aldermant soils**

*Percentage of map unit:* 2 percent  
*Landform:* Concave mountain slopes

**154—Kruse-Aldermant complex, 20 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands, plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,500 to 3,000 feet  
*Mean annual precipitation:* 27 to 30 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Kruse and similar soils:* 50 percent  
*Aldermant and similar soils:* 40 percent  
*Dissimilar minor components:* 10 percent

***Characteristics of Kruse***

**Setting**

*Landform:* Canyons, hillslopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over mixed colluvium  
*Slope range:* 20 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline

## Soil Survey of Clearwater Area, Idaho

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/ninebark (CN506)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; ashy loam

BA—6 to 14 inches; ashy loam

Bt—14 to 41 inches; clay loam

2BC—41 to 48 inches; sandy loam

2C—48 to 61 inches; loamy sand

## ***Characteristics of Aldermand***

### **Setting**

*Landform:* Hillslopes, canyons

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash and/or alluvium derived from granite and/or metamorphic rock

*Slope range:* 20 to 40 percent

*Depth to restrictive feature:* 20 to 55 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 17 inches; ashy loam

2Bw2—17 to 25 inches; sandy loam

2BC—25 to 33 inches; sandy loam

2C1—33 to 44 inches; gravelly sandy loam

2C2—44 to 62 inches; very stony loamy sand

## ***Dissimilar Minor Components***

### **Uvi soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex escarpments on mountain slopes

**Dworshak soils**

*Percentage of map unit:* 3 percent

*Landform:* Swales on mountain slopes

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

**155—Kruse-Aldermant complex, 40 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,800 feet

*Mean annual precipitation:* 30 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Kruse and similar soils:* 50 percent

*Aldermant and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Kruse***

**Setting**

*Landform:* Canyons, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over mixed colluvium

*Slope range:* 40 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; ashy loam

BA—6 to 14 inches; ashy loam

Bt—14 to 41 inches; clay loam

2BC—41 to 48 inches; sandy loam

2C—48 to 61 inches; loamy sand



### ***Characteristics of Aldermand***

#### **Setting**

*Landform:* Canyons, mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or alluvium derived from granite and/or metamorphic rock

*Slope range:* 40 to 65 percent

*Depth to restrictive feature:* 20 to 55 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 17 inches; ashy loam

2Bw2—17 to 25 inches; sandy loam

2BC—25 to 33 inches; sandy loam

2C1—33 to 44 inches; gravelly sandy loam

2C2—44 to 62 inches; very stony loamy sand

### ***Dissimilar Minor Components***

#### **Bouldercreek soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

#### **Kauder soils**

*Percentage of map unit:* 3 percent

*Landform:* Benches in canyons, benches and broad summits of ridges

#### **Poorman soils, dry**

*Percentage of map unit:* 3 percent

*Landform:* Concave mountain slopes

#### **Rock outcrop**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of mountain slopes

#### **Texascreek soils, moist**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

## **156—Kruse-McCrosket complex, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains, plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,200 to 4,000 feet  
*Mean annual precipitation:* 25 to 26 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Kruse and similar soils:* 55 percent  
*McCrosket, dry, and similar soils:* 40 percent  
*Dissimilar minor components:* 5 percent

### **Characteristics of Kruse**

#### **Setting**

*Landform:* Hillslopes, mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over mixed colluvium  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 9.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/ninebark (CN506)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 6 inches; ashy loam  
BA—6 to 14 inches; ashy loam  
Bt—14 to 41 inches; clay loam  
2BC—41 to 48 inches; sandy loam  
2C—48 to 61 inches; loamy sand

### **Characteristics of McCrosket, Dry**

#### **Setting**

*Landform:* Hillslopes, mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over residuum derived from metasedimentary rock

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Douglas-fir/ninebark (CN260)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; gravelly silt loam

Bw1—15 to 35 inches; extremely cobbly loam

Bw2—35 to 48 inches; extremely cobbly loam

Cr—48 to 58 inches; weathered bedrock

***Dissimilar Minor Components***

**Rock outcrop**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of mountain slopes

**Noil soils**

*Percentage of map unit:* 2 percent

*Landform:* Mountain slopes

***157—Kruse-Noil complex, 20 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,800 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Kruse and similar soils:* 70 percent

*Noil and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Kruse***

**Setting**

*Landform:* Ridges, mountain slopes

*Geomorphic position (two-dimensional):* Summits, shoulders, backslopes

## Soil Survey of Clearwater Area, Idaho

*Geomorphic position (three-dimensional):* Mountain flanks, mountaintops

*Downslope shape:* Convex

*Across-slope shape:* Linear, convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over mixed colluvium

*Slope range:* 20 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/ninebark (CN506)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; ashy loam

BA—6 to 14 inches; ashy loam

Bt—14 to 41 inches; clay loam

2BC—41 to 48 inches; sandy loam

2C—48 to 61 inches; loamy sand

## ***Characteristics of Noil***

### **Setting**

*Landform:* Ridges

*Geomorphic position (two-dimensional):* Summits

*Geomorphic position (three-dimensional):* Mountain flanks, mountaintops

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Loess and volcanic ash over colluvium over residuum derived from metamorphic rock

*Slope range:* 20 to 35 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 4.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; gravelly ashy loam

Bw1—9 to 19 inches; very gravelly sandy loam

Bw2—19 to 29 inches; extremely gravelly sandy loam

C—29 to 43 inches; extremely gravelly sandy loam

Cr—43 to 53 inches; weathered bedrock

***Dissimilar Minor Components***

**Teakean soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Brequito soils**

*Percentage of map unit:* 2 percent

*Landform:* Benches on mountain slopes

**Whiskeycreek soils, wet**

*Percentage of map unit:* 2 percent

*Landform:* Canyons

**Cobbler soils**

*Percentage of map unit:* 1 percent

*Landform:* Convex mountain slopes

**158—Kruse-Teakean complex, 20 to 45 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,200 to 3,800 feet

*Mean annual precipitation:* 25 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Kruse and similar soils:* 45 percent

*Teakean and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Kruse***

**Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over mixed colluvium

*Slope range:* 20 to 45 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 6 inches; ashy loam

BA—6 to 14 inches; ashy loam

Bt—14 to 41 inches; clay loam

2BC—41 to 48 inches; sandy loam

2C—48 to 61 inches; loamy sand

**Characteristics of Teakean**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess over loamy colluvium derived from metamorphic rock

*Slope range:* 20 to 45 percent

*Depth to restrictive feature:* 40 to 60 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 16 to 26 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 13 inches; ashy silt loam

Bt—13 to 23 inches; silty clay loam

B/E—23 to 42 inches; gravelly clay loam

Btx—42 to 61 inches; gravelly clay loam

***Dissimilar Minor Components***

**Noil soils**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

**Kruse soils, dry**

*Percentage of map unit:* 4 percent

*Landform:* Ridges, mountain slopes

**Uvi soils**

*Percentage of map unit:* 3 percent

*Landform:* Smooth mountain slopes

**Swayne soils**

*Percentage of map unit:* 2 percent

*Landform:* Ridges

**Agatha soils**

*Percentage of map unit:* 1 percent

*Landform:* Convex side slopes of canyons

***159—Larkin-Driscoll complex, 25 to 50 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,100 to 3,200 feet

*Mean annual precipitation:* 24 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Larkin and similar soils:* 50 percent

*Driscoll and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Larkin***

**Setting**

*Landform:* Structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from basalt

*Slope range:* 25 to 50 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.8 inches)



**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 21 inches; silt loam

Bt—21 to 62 inches; silty clay loam

***Characteristics of Driscoll***

**Setting**

*Landform:* Structural benches

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 25 to 35 percent

*Depth to restrictive feature:* 8 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 10 to 34 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

A—0 to 13 inches; silt loam

Bt—13 to 20 inches; silty clay loam

E—20 to 24 inches; silt loam

2Btb—24 to 54 inches; silty clay

2Btkb—54 to 70 inches; silty clay

***Dissimilar Minor Components***

**Cavendish soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches

**Jacket soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex knobs on benches in canyons

**Keuterville soils**

*Percentage of map unit:* 2 percent

*Landform:* Canyons

**Southwick soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills on plateaus

**Joel soils**

*Percentage of map unit:* 1 percent

*Landform:* Hills on plateaus

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of hillslopes

**Wellsbench soils**

*Percentage of map unit:* 1 percent

*Landform:* Concave areas of benches

**160—Lebaron-Latahco complex, 0 to 3 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,840 to 3,300 feet

*Mean annual precipitation:* 27 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Lebaron and similar soils:* 45 percent

*Latahco and similar soils:* 40 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Lebaron***

**Setting**

*Landform:* Drainageways, flood plains

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* Rare (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the surface to a depth of about 4 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* MEADOW (R009XY018ID)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 9 inches; ashy silt loam

E—9 to 17 inches; silt loam

Btb—17 to 62 inches; silty clay loam

### ***Characteristics of Latahco***

#### **Setting**

*Landform:* Flood plains, drainageways

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Mixed alluvium and/or loess

*Slope range:* 0 to 3 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 7 to 19 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3w

*Ecological site:* DRY MEADOW (R009XY019ID)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A1—1 to 4 inches; silt loam

A2—4 to 12 inches; silt loam

E—12 to 27 inches; silt loam

Bt—27 to 62 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Wilkins soils**

*Percentage of map unit:* 10 percent

*Landform:* Swales

#### **Crumarine soils**

*Percentage of map unit:* 5 percent

*Landform:* Narrow flood plains

## **161—Lewhand-Burntcreek complex, 0 to 2 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,350 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Lewhand and similar soils:* 65 percent

*Burntcreek and similar soils:* 20 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Lewhand**

#### **Setting**

*Landform:* Flood plains, drainageways

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Volcanic ash over mixed alluvium

*Slope range:* 0 to 2 percent

*Depth to restrictive feature:* 13 to 19 inches to a fragipan

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 2 inches  
(see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* MEADOW (R009XY018ID)

#### **Typical profile**

A—0 to 8 inches; ashy silty clay loam

BE—8 to 12 inches; silty clay loam

E—12 to 18 inches; silt loam

Btx—18 to 32 inches; silt loam

Bt—32 to 60 inches; stratified silt loam to sand

### **Characteristics of Burntcreek**

#### **Setting**

*Landform:* Drainageways, flood plains

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 2 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 7 to 19 inches (see Water  
Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Ap1—0 to 7 inches; ashy loam

Ap2—7 to 11 inches; loam

Bw1—11 to 28 inches; loam

Bw2—28 to 36 inches; loam

C—36 to 60 inches; stratified silt loam to very gravelly loam

***Dissimilar Minor Components***

**Grasshopper soils**

*Percentage of map unit:* 10 percent

*Landform:* Flood plains

**Hildebrand soils**

*Percentage of map unit:* 3 percent

*Landform:* Stream terraces

**Teneb soils**

*Percentage of map unit:* 2 percent

*Landform:* Drainageways

**162—Lewhand-Teneb complex, 0 to 2 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,400 feet

*Mean annual precipitation:* 35 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Lewhand and similar soils:* 80 percent

*Teneb and similar soils:* 15 percent

*Dissimilar minor component:* 5 percent

***Characteristics of Lewhand***

**Setting**

*Landform:* Flood plains, drainageways

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash over mixed alluvium

*Slope range:* 0 to 2 percent

*Depth to restrictive feature:* 13 to 19 inches to a fragipan

*Drainage class:* Poorly drained

## Soil Survey of Clearwater Area, Idaho

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 2 inches  
(see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.3 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* MEADOW (R009XY018ID)

### **Typical profile**

A—0 to 8 inches; ashy silty clay loam

BE—8 to 12 inches; silty clay loam

E—12 to 18 inches; silt loam

Btx—18 to 32 inches; silt loam

Bt—32 to 60 inches; stratified silt loam to sand

## ***Characteristics of Teneb***

### **Setting**

*Landform:* Flood plains, drainageways

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

### **Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 2 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Frequent (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 4 inches  
(see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.4 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* MEADOW (R009XY018ID)

### **Typical profile**

A—0 to 7 inches; ashy silt loam

Btg—7 to 24 inches; silty clay loam

EB—24 to 34 inches; silt loam

Btb—34 to 64 inches; silty clay loam

## ***Dissimilar Minor Component***

### **Burntcreek soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex flood plains

## **163—Longbar-Bigtalk complex, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Longbar and similar soils:* 55 percent

*Bigtalk and similar soils:* 35 percent

*Dissimilar minor component:* 10 percent

### **Characteristics of Longbar**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Colluvium derived from anorthosite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand Fir Mosaic (FJ001)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 6 inches; loam

BAt—6 to 12 inches; loam

Bt—12 to 28 inches; loam

BC—28 to 41 inches; gravelly sandy loam

C1—41 to 50 inches; sandy loam

C2—50 to 62 inches; loamy sand

### **Characteristics of Bigtalk**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear



## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Colluvium derived from anorthosite and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/wild ginger (CN516)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A1—1 to 3 inches; loam

A2—3 to 8 inches; loam

Bt—8 to 35 inches; loam

BC—35 to 48 inches; gravelly loam

C—48 to 61 inches; fine sandy loam

### ***Dissimilar Minor Component***

### **Floodwood soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Benches on mountain slopes

## **164—Longbar-Bigtalk complex, 35 to 65 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Longbar and similar soils:* 55 percent

*Bigtalk and similar soils:* 35 percent

*Dissimilar minor component:* 10 percent

### ***Characteristics of Longbar***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Colluvium derived from anorthosite

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand Fir Mosaic (FJ001)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 6 inches; loam

BAt—6 to 12 inches; loam

Bt—12 to 28 inches; loam

BC—28 to 41 inches; gravelly sandy loam

C1—41 to 50 inches; sandy loam

C2—50 to 62 inches; loamy sand

***Characteristics of Bigtalk***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Colluvium derived from anorthosite and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/wild ginger (CN516)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A1—1 to 3 inches; loam

A2—3 to 8 inches; loam

Bt—8 to 35 inches; loam  
BC—35 to 48 inches; gravelly loam  
C—48 to 61 inches; fine sandy loam

***Dissimilar Minor Component***

**Floodwood soils, dry**

*Percentage of map unit:* 10 percent  
*Landform:* Benches on mountain slopes

**165—Longpen ashy silt loam, 20 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,100 to 3,000 feet  
*Mean annual precipitation:* 28 to 35 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Longpen and similar soils:* 75 percent  
*Dissimilar minor components:* 25 percent

***Characteristics of Longpen***

**Setting**

*Landform:* Hillslopes, canyons  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from basalt  
*Slope range:* 20 to 40 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A1—2 to 6 inches; ashy silt loam  
A2—6 to 9 inches; ashy silt loam  
Bt—9 to 49 inches; silt loam  
2Btb—49 to 71 inches; silty clay loam

***Dissimilar Minor Components***

**Cavendish soils**

*Percentage of map unit:* 9 percent

*Landform:* Hills and benches on plateaus

**Agatha soils**

*Percentage of map unit:* 4 percent

*Landform:* Convex side slopes of canyons

**Klickson soils**

*Percentage of map unit:* 4 percent

*Landform:* Canyons

**Sly soils**

*Percentage of map unit:* 4 percent

*Landform:* Benches in canyons

**Campra soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex escarpments in canyons

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas in canyons

**Setters soils**

*Percentage of map unit:* 1 percent

*Landform:* Benches in canyons

***166—Longpen ashy silt loam, 5 to 20 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,100 to 3,400 feet

*Mean annual precipitation:* 28 to 40 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Longpen and similar soils:* 60 percent

*Dissimilar minor components:* 40 percent

***Characteristics of Longpen***

**Setting**

*Landform:* Hillslopes, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from basalt

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/ninebark (CN506)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 6 inches; ashy silt loam

A2—6 to 9 inches; ashy silt loam

Bt—9 to 49 inches; silt loam

2Btb—49 to 71 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Carlinton soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches in canyons

#### **Seddow soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches in canyons

#### **Setters soils, moist**

*Percentage of map unit:* 10 percent

*Landform:* Benches on hillslopes

#### **Reggear soils**

*Percentage of map unit:* 5 percent

*Landform:* Hills on plateaus

#### **Riswold soils**

*Percentage of map unit:* 3 percent

*Landform:* Steep hillslopes on plateaus

#### **Wilkins soils**

*Percentage of map unit:* 2 percent

*Landform:* Swales

## **167—Meland-Jacket complex, 5 to 20 percent slopes**

### ***Map Unit Setting***

*General landscape:* Canyonlands, plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 2,800 to 3,000 feet

*Mean annual precipitation:* 18 to 24 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Meland and similar soils:* 50 percent

*Jacket and similar soils:* 40 percent

*Dissimilar minor component:* 10 percent

### **Characteristics of Meland**

#### **Setting**

*Landform:* Hills, knobs, structural benches

*Geomorphic position (two-dimensional):* Shoulders

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* LOAMY 16-22 FEID-PSSPS (R009XY003ID)

#### **Typical profile**

A—0 to 16 inches; silt loam

Bt—16 to 35 inches; gravelly silty clay loam

R—35 to 45 inches; unweathered bedrock

### **Characteristics of Jacket**

#### **Setting**

*Landform:* Hillslopes, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Ap—0 to 7 inches; silt loam

Bt1—7 to 27 inches; silty clay loam

Bt2—27 to 56 inches; silty clay loam

Bt3—56 to 63 inches; silty clay

***Dissimilar Minor Component***

**Gwin soils**

*Percentage of map unit:* 10 percent

*Landform:* Side slopes of canyons

**168—Meland-Keuterville complex, 10 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,500 to 3,700 feet

*Mean annual precipitation:* 18 to 24 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Meland and similar soils:* 55 percent

*Keuterville and similar soils:* 30 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Meland***

**Setting**

*Landform:* Hillslopes, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 10 to 25 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches



*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 6.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Ecological site:* LOAMY 16-22 FEID-PSSPS (R009XY003ID)

**Typical profile**

A—0 to 16 inches; silt loam

Bt—16 to 35 inches; gravelly silty clay loam

R—35 to 45 inches; unweathered bedrock

***Characteristics of Keuterville***

**Setting**

*Landform:* Hillslopes, structural benches

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

A—0 to 13 inches; gravelly silt loam

Bt1—13 to 49 inches; very gravelly silty clay loam

Bt2—49 to 61 inches; very cobbly silty clay loam

***Dissimilar Minor Components***

**Gwin soils**

*Percentage of map unit:* 5 percent

*Landform:* Side slopes of canyons

**Kettenbach soils**

*Percentage of map unit:* 5 percent

*Landform:* Side slopes of canyons

**Larkin soils**

*Percentage of map unit:* 5 percent

*Landform:* Hills on plateaus, benches in canyons

## **169—Mushel-Brodeer complex, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,600 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Mushel and similar soils:* 60 percent

*Brodeer and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Mushel**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beادلily (CN530)

#### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 6 inches; ashy silt loam

Bw—6 to 13 inches; ashy silt loam

2BE—13 to 21 inches; loam

2Bt—21 to 39 inches; loam

2BC—39 to 48 inches; loam

2C—48 to 68 inches; sandy loam

### **Characteristics of Brodeer**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw—4 to 21 inches; ashy silt loam  
2Bt—21 to 59 inches; loam  
2BC—59 to 67 inches; gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Aquandic Endoaquepts**

*Percentage of map unit:* 5 percent  
*Landform:* Drainageways

#### **Judgetown soils**

*Percentage of map unit:* 5 percent  
*Landform:* Convex escarpments on mountain slopes

## **170—Mushel-Dullaxe complex, 35 to 70 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,600 to 4,000 feet  
*Mean annual precipitation:* 45 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Mushel and similar soils:* 50 percent  
*Dullaxe and similar soils:* 45 percent  
*Dissimilar minor components:* 5 percent

### ***Characteristics of Mushel***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock  
*Slope range:* 35 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material  
A—3 to 6 inches; ashy silt loam  
Bw—6 to 13 inches; ashy silt loam  
2BE—13 to 21 inches; loam  
2Bt—21 to 39 inches; loam  
2BC—39 to 48 inches; loam  
2C—48 to 68 inches; sandy loam

### ***Characteristics of Dullaxe***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 35 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy loam

Bw1—7 to 19 inches; ashy loam

2Bw2—19 to 27 inches; loam

2Bw3—27 to 38 inches; sandy loam

2BC—38 to 46 inches; sandy loam

2C—46 to 66 inches; loamy sand

***Dissimilar Minor Components***

**Judgetown soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

**Aquandic Cryaquepts**

*Percentage of map unit:* 1 percent

*Landform:* Flood plains

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of mountain slopes

**171—Nakarna ashy silt loam, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains, foothills

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,200 to 4,700 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Nakarna, high precipitation, and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

***Characteristics of Nakarna, High Precipitation***

**Setting**

*Landform:* Hills, ridges, mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to west (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from mica schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
Oe—1 to 2 inches; moderately decomposed plant material  
A—2 to 4 inches; ashy silt loam  
Bw1—4 to 16 inches; silt loam  
2Bw2—16 to 36 inches; loam  
2C—36 to 49 inches; gravelly fine sandy loam  
2Cr—49 to 59 inches; weathered bedrock

***Dissimilar Minor Components***

**Boulder creek soils, high precipitation**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

**Flewsie soils, high precipitation**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

**Floodwood soils**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes, ridges

**Marble creek soils**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

**Odonnell soils**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

**172—Nakarna ashy silt loam, 35 to 65 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains, foothills  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,200 to 4,700 feet  
*Mean annual precipitation:* 35 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Nakarna, high precipitation, and similar soils:* 75 percent  
*Dissimilar minor components:* 25 percent

### ***Characteristics of Nakarna, High Precipitation***

#### **Setting**

*Landform:* Hills, mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* South  
*Aspect (range):* East to west (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from mica schist  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 5 inches; ashy silt loam  
Bw1—5 to 15 inches; ashy silt loam  
2Bw2—15 to 34 inches; gravelly loam  
2C—34 to 42 inches; gravelly sandy loam  
2Cr—42 to 52 inches; weathered bedrock

### ***Dissimilar Minor Components***

#### **Boulder creek soils, high precipitation**

*Percentage of map unit:* 10 percent  
*Landform:* Convex mountain slopes

#### **Flewsie soils, high precipitation**

*Percentage of map unit:* 10 percent  
*Landform:* Concave mountain slopes

#### **Marble creek soils**

*Percentage of map unit:* 5 percent  
*Landform:* Sharp, convex mountain slopes

## ***173—Nakarna-Nakarna, warm complex, 35 to 65 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,800 to 4,700 feet  
*Mean annual precipitation:* 35 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days



**Map Unit Composition**

*Nakarna and similar soils:* 45 percent

*Nakarna, warm, and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

**Characteristics of Nakarna**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northeast

*Aspect (range):* Northwest to east (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from mica schist

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western hemlock/queencup beadrily (CN570)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy silt loam

Bw1—5 to 15 inches; ashy silt loam

2Bw2—15 to 34 inches; gravelly loam

2C—34 to 42 inches; gravelly sandy loam

2Cr—42 to 52 inches; weathered bedrock

**Characteristics of Nakarna, Warm**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to southwest (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from mica schist

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlelily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy silt loam

Bw1—5 to 15 inches; ashy silt loam

2Bw2—15 to 34 inches; gravelly loam

2C—34 to 42 inches; gravelly sandy loam

2Cr—42 to 52 inches; weathered bedrock

***Dissimilar Minor Components***

**Boulder creek soils**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

**Keeler soils**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes

**Marble creek soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

***174—Narnett-Jury complex, 15 to 30 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,800 to 4,000 feet

*Mean annual precipitation:* 45 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Narnett and similar soils:* 60 percent

*Jury and similar soils:* 20 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Narnett***

**Setting**

*Landform:* Mountains, terraces

*Geomorphic position (two-dimensional):* Footslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over mixed silty alluvium

*Slope range:* 15 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Subalpine fir/queencup beadlily (CN620)

**Typical profile**

A—0 to 9 inches; medial silt loam

2Bw—9 to 15 inches; silt loam

2Bt—15 to 50 inches; silt loam

3BC—50 to 58 inches; silt loam

3C—58 to 80 inches; very gravelly silt loam

***Characteristics of Jury***

**Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 15 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 6 inches; medial silt loam

Bw1—6 to 29 inches; medial silt loam

2Bw2—29 to 48 inches; sandy loam

2C—48 to 62 inches; loamy sand

***Dissimilar Minor Components***

**Judgetown soils, moist**

*Percentage of map unit:* 10 percent

*Landform:* Convex mountain slopes

**Aldermant soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Boulder creek soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

**Aquandic Cryaquepts**

*Percentage of map unit:* 1 percent

*Landform:* Flood plains

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of mountain slopes

***175—Neva ashy silt loam, 35 to 70 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 4,200 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Neva and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Neva***

**Setting**

*Landform:* Ridges, mountains

*Geomorphic position (two-dimensional):* Footslopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess and colluvium derived from metamorphic rock

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 13 inches; ashy silt loam

2BE—13 to 25 inches; loam

2Bt—25 to 50 inches; loam

2BC—50 to 56 inches; loam

2C—56 to 62 inches; coarse sandy loam

***Dissimilar Minor Components***

**Noil soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

**Carlinton soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches on mountain slopes

**Cobbler soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

**176—Newlig silt loam, 5 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 1,240 feet

*Mean annual precipitation:* 23 to 28 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Newlig and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Newlig***

**Setting**

*Landform:* Terraces

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Ponderosa pine/common snowberry (CN170)

### **Typical profile**

A1—0 to 3 inches; silt loam  
A2—3 to 18 inches; silt loam  
AB—18 to 22 inches; very fine sandy loam  
Bt1—22 to 30 inches; loam  
Bt2—30 to 55 inches; clay loam  
BC—55 to 65 inches; loam

### ***Dissimilar Minor Components***

#### **Jacket soils**

*Percentage of map unit:* 7 percent  
*Landform:* Eroded knobs and convex areas on footslopes of canyons

#### **Keuterville soils**

*Percentage of map unit:* 5 percent  
*Landform:* Colluvial footslopes of canyons

#### **Campra soils**

*Percentage of map unit:* 3 percent  
*Landform:* Draws on dissected terraces in canyons

## **177—Noil-Keeler complex, 40 to 75 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,700 to 3,100 feet  
*Mean annual precipitation:* 30 to 45 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

### ***Map Unit Composition***

*Noil and similar soils:* 45 percent  
*Keeler and similar soils:* 30 percent  
*Dissimilar minor components:* 25 percent

### ***Characteristics of Noil***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and volcanic ash over colluvium over residuum derived from metamorphic rock

*Slope range:* 40 to 75 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 4.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; gravelly ashy loam

Bw1—9 to 19 inches; very gravelly sandy loam

Bw2—19 to 29 inches; extremely gravelly sandy loam

C—29 to 43 inches; extremely gravelly sandy loam

Cr—43 to 53 inches; weathered bedrock

***Characteristics of Keeler***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 40 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy loam

BA—5 to 12 inches; ashy loam

Bt1—12 to 39 inches; loam



2Bt2—39 to 48 inches; gravelly sandy loam

2C—48 to 74 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Bouldercreek soils**

*Percentage of map unit:* 13 percent

*Landform:* Mountain slopes

**Rock outcrop**

*Percentage of map unit:* 7 percent

*Landform:* Convex areas of mountain slopes

**Keeler soils, dry**

*Percentage of map unit:* 3 percent

*Landform:* Concave draws on mountain slopes

**Texascreek soils, moist**

*Percentage of map unit:* 2 percent

*Landform:* Convex mountain slopes

***178—Noil-Bouldercreek-Rock outcrop complex, 45 to 85 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 4,200 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Noil and similar soils:* 70 percent

*Bouldercreek, warm, and similar soils:* 15 percent

*Rock outcrop:* 15 percent

***Characteristics of Noil***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess and volcanic ash over colluvium over residuum derived from metamorphic rock

*Slope range:* 45 to 85 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

## Soil Survey of Clearwater Area, Idaho

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 4.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Grand fir/ninebark (CN506)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; gravelly ashy loam

Bw1—9 to 19 inches; very gravelly sandy loam

Bw2—19 to 29 inches; extremely gravelly sandy loam

C—29 to 43 inches; extremely gravelly sandy loam

Cr—43 to 53 inches; weathered bedrock

## ***Characteristics of Boulder creek, Warm***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 45 to 85 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy loam

Bw1—8 to 21 inches; ashy loam

2Bw2—21 to 27 inches; gravelly loam

2Bw3—27 to 34 inches; very gravelly sandy loam

2BC—34 to 53 inches; very cobbly coarse sandy loam

2C—53 to 69 inches; very gravelly loamy sand

## ***Characteristics of Rock Outcrop***

*Description of areas:* Exposures of bare bedrock

**179—Norwidge-Threebear complex, moist, 5 to 25 percent slopes**

**Map Unit Setting**

General landscape: Mountains, plateaus  
Major land resource area (MLRA): 43A—Northern Rocky Mountains  
Elevation: 2,900 to 3,400 feet  
Mean annual precipitation: 35 to 45 inches  
Mean annual air temperature: 38 to 44 degrees F  
Frost-free period: 50 to 110 days

**Map Unit Composition**

Norwidge, moist, and similar soils: 50 percent  
Threebear, moist, and similar soils: 45 percent  
Dissimilar minor components: 5 percent

**Characteristics of Norwidge, Moist**

**Setting**

Landform: Mountain slopes, hillslopes  
Downslope shape: Concave  
Across-slope shape: Linear  
Aspect (representative): Northwest  
Aspect (range): Southwest to northeast (clockwise)

**Properties and qualities**

Parent material: Volcanic ash over loess and/or reworked loess  
Slope range: 5 to 25 percent  
Depth to restrictive feature: None within a depth of 60 inches  
Drainage class: Well drained  
Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high  
Flooding frequency: None  
Ponding frequency: None  
Seasonal high water table (minimum depth): More than 72 inches  
Salinity (maximum): Not saline  
Sodicity (maximum): Not sodic  
Available water capacity (entire profile): Very high (about 19.8 inches)

**Interpretive groups**

Land capability subclass (nonirrigated): 4e  
Plant community class: Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material  
A—3 to 6 inches; medial silt loam  
Bw—6 to 17 inches; medial silt loam  
2E—17 to 26 inches; silt loam  
2Bt/E—26 to 42 inches; silty clay loam  
3Btx—42 to 81 inches; silty clay loam

**Characteristics of Threebear, Moist**

**Setting**

Landform: Mountain slopes, hillslopes  
Downslope shape: Linear

*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess  
*Slope range:* 5 to 25 percent  
*Depth to restrictive feature:* 20 to 40 inches to a fragipan  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* About 4 to 28 inches (see Water Features table)  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; medial silt loam  
Bw—3 to 18 inches; medial silt loam  
2E/B—18 to 26 inches; silt loam  
2B/E—26 to 40 inches; silt loam  
2Btx—40 to 69 inches; silty clay loam

***Dissimilar Minor Components***

**Hildebrand soils**

*Percentage of map unit:* 3 percent  
*Landform:* Stream terraces

**Lado soils**

*Percentage of map unit:* 2 percent  
*Landform:* Mountain slopes, convex mountain slopes

***180—Odonnell-Grandad complex, 10 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 3,500 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Odonnell and similar soils:* 65 percent  
*Grandad and similar soils:* 15 percent  
*Dissimilar minor components:* 20 percent

### ***Characteristics of Odonnell***

#### **Setting**

*Landform:* Structural benches, mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over silty alluvium, reworked loess, and/or colluvium derived from gneiss, anorthosite, and/or schist

*Slope range:* 10 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 28 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.2 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/maidenhair fern (CN560)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 5 inches; medial silt loam

Bw—5 to 16 inches; medial silt loam

2E—16 to 25 inches; silt loam

2B/E—25 to 44 inches; silt loam

2Btb—44 to 64 inches; silt loam

### ***Characteristics of Grandad***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 25 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

***Dissimilar Minor Components***

**Dworshak soils**

*Percentage of map unit:* 10 percent

*Landform:* Ridges

**Keeler soils**

*Percentage of map unit:* 10 percent

*Landform:* Mountain slopes

***181—Odonnell medial silt loam, 15 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Foothills

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,600 to 4,400 feet

*Mean annual precipitation:* 55 to 65 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Odonnell and similar soils:* 75 percent

*Dissimilar minor components:* 25 percent

***Characteristics of Odonnell***

**Setting**

*Landform:* Hills

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to northwest (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over silty alluvium, reworked loess, and/or colluvium derived from gneiss, anorthosite, and/or schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

## Soil Survey of Clearwater Area, Idaho

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 28 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/ladyfern (CN540)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; medial silt loam

Bw—7 to 17 inches; medial silt loam

2E—17 to 25 inches; silt loam

2Btb—25 to 53 inches; silty clay loam

2BC—53 to 63 inches; silt loam

### ***Dissimilar Minor Components***

#### **Floodwood soils**

*Percentage of map unit:* 14 percent

*Landform:* Mountain slopes, ridges

#### **Hugus soils**

*Percentage of map unit:* 7 percent

*Landform:* Mountain slopes

#### **Threebear soils**

*Percentage of map unit:* 4 percent

*Landform:* Terraces, footslopes, and toeslopes of hills

## **182—Oxyaquic Xerofluvents-Itzee complex, 0 to 5 percent slopes**

### ***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 920 to 2,800 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### ***Map Unit Composition***

*Oxyaquic Xerofluvents, occasionally flooded, and similar soils:* 70 percent

*Itzee and similar soils:* 15 percent

*Dissimilar minor components:* 15 percent

### ***Characteristics of Oxyaquic Xerofluvents, Occasionally Flooded***

#### **Setting**

*Landform:* Flood plains

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects



**Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 5 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* High

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 19 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 5w

*Ecological site:* DRY MEADOW (R009XY019ID)

**Typical profile**

A—0 to 6 inches; fine sandy loam

C—6 to 17 inches; loamy fine sand

Ab—17 to 18 inches; very fine sandy loam

C'—18 to 39 inches; loamy fine sand

Ab'—39 to 41 inches; very fine sandy loam

C"—41 to 60 inches; very cobbly loamy sand

***Characteristics of Itzee***

**Setting**

*Landform:* Terraces

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 2 to 5 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* High

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; sandy loam

Bw—4 to 12 inches; fine sandy loam

C1—12 to 47 inches; loamy fine sand

C2—47 to 60 inches; extremely cobbly fine sand

***Dissimilar Minor Components***

**Newlig soils**

*Percentage of map unit:* 10 percent

*Landform:* Footslopes above terraces

**Riverwash**

*Percentage of map unit:* 5 percent

*Landform:* Flood plains

**183—Pits, quarry**

*Map unit Percentage of map unit:* Pits, quarry—100 percent

*Description of areas:* Open excavations in areas where soil material has been removed and the underlying rock has been mined and commonly is crushed

**184—Placer-Dowper-Grangemont complex, 15 to 40 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Placer and similar soils:* 40 percent

*Dowper and similar soils:* 30 percent

*Grangemont and similar soils:* 15 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Placer***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Convex

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over residuum derived from basalt

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 5 inches; ashy loam

BA—5 to 10 inches; ashy loam

2Bt—10 to 31 inches; loam

2BC—31 to 52 inches; extremely paracobbly loam

2Cr—52 to 62 inches; weathered bedrock

***Characteristics of Dowper***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over residuum derived from basalt

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* 60 to 65 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 4 inches; moderately decomposed plant material

A—4 to 6 inches; ashy loam

Bw—6 to 21 inches; ashy loam

2Bt1—21 to 58 inches; loam

2Bt2—58 to 65 inches; gravelly sandy clay loam

2Cr—65 to 75 inches; weathered bedrock

***Characteristics of Grangemont***

**Setting**

*Landform:* Broad ridges

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 15 to 25 percent

## Soil Survey of Clearwater Area, Idaho

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 18.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadrill (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 7 inches; ashy silt loam

Bw—7 to 14 inches; ashy silt loam

2B/E—14 to 38 inches; silt loam

2Bt—38 to 95 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Placer soils, dry**

*Percentage of map unit:* 8 percent

*Landform:* Smooth hillslopes

#### **Campra soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex side slopes of canyons

#### **Bandmill soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills on plateaus, benches in canyons

## **185—Poorman ashy loam, 35 to 65 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 4,400 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Poorman, dry, and similar soils:* 70 percent

*Dissimilar minor components:* 30 percent

### ***Characteristics of Poorman, Dry***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt—13 to 29 inches; loam

2BC—29 to 36 inches; gravelly loam

2C1—36 to 52 inches; sandy loam

2C2—52 to 61 inches; sandy loam

***Dissimilar Minor Components***

**Poorman soils**

*Percentage of map unit:* 13 percent

*Landform:* Concave mountain slopes

**Grandad soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Sharp, concave mountain slopes

**Nakarna soils, dry**

*Percentage of map unit:* 3 percent

*Landform:* Sharp, convex mountain slopes

**Brodeer soils, dry**

*Percentage of map unit:* 2 percent

*Landform:* Drainageways

**Nakarna soils, warm**

*Percentage of map unit:* 2 percent

*Landform:* Sharp, convex mountain slopes

**186—Poorman, dry-Poorman complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,400 to 4,000 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

**Map Unit Composition**

*Poorman, dry, and similar soils:* 60 percent

*Poorman and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

**Characteristics of Poorman, Dry**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt—13 to 29 inches; loam

2BC—29 to 36 inches; gravelly loam

2C1—36 to 52 inches; sandy loam

2C2—52 to 61 inches; sandy loam

**Characteristics of Poorman**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt—13 to 29 inches; loam

2BC—29 to 36 inches; gravelly loam

2C1—36 to 52 inches; sandy loam

2C2—52 to 61 inches; sandy loam

***Dissimilar Minor Components***

**Grandad soils, dry**

*Percentage of map unit:* 6 percent

*Landform:* Concave mountain slopes, ridges

**Rettig soils, warm, dry**

*Percentage of map unit:* 4 percent

*Landform:* Ridges, convex mountain slopes

**187—Poorman-Grandad complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,200 to 3,500 feet

*Mean annual precipitation:* 38 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Poorman and similar soils:* 55 percent

*Grandad and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Poorman***

**Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high



## Soil Survey of Clearwater Area, Idaho

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.4 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt—13 to 29 inches; loam

2BC—29 to 36 inches; gravelly loam

2C1—36 to 52 inches; sandy loam

2C2—52 to 61 inches; sandy loam

## ***Characteristics of Grandad***

### **Setting**

*Landform:* Mountain slopes, ridges

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

***Dissimilar Minor Components***

**Grandad soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes

**Nakarna soils, warm**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**188—Poorman-Grandad complex, 35 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 4,200 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Poorman and similar soils:* 50 percent

*Grandad and similar soils:* 40 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Poorman***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt—13 to 29 inches; loam  
2BC—29 to 36 inches; gravelly loam  
2C1—36 to 52 inches; sandy loam  
2C2—52 to 61 inches; sandy loam

### ***Characteristics of Grandad***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy silt loam  
Bw—3 to 19 inches; ashy silt loam  
2Bt1—19 to 30 inches; loam  
2Bt2—30 to 39 inches; gravelly loam  
2BC—39 to 45 inches; gravelly loam  
2C1—45 to 58 inches; loam  
2C2—58 to 64 inches; paragravelly sandy loam

### ***Dissimilar Minor Components***

#### **Nakarna soils, warm**

*Percentage of map unit:* 5 percent  
*Landform:* Mountain slopes

#### **Scand soils, wet**

*Percentage of map unit:* 3 percent  
*Landform:* Structural benches, ridges

#### **Rock outcrop**

*Percentage of map unit:* 1 percent  
*Landform:* Convex areas of mountain slopes

#### **Township soils, wet**

*Percentage of map unit:* 1 percent  
*Landform:* Concave mountain slopes

## **189—Poorman-Grandad, dry complex, 15 to 35 percent slopes**

### **Map Unit Setting**

General landscape: Mountains  
Major land resource area (MLRA): 43A—Northern Rocky Mountains  
Elevation: 3,000 to 4,000 feet  
Mean annual precipitation: 30 to 50 inches  
Mean annual air temperature: 38 to 44 degrees F  
Frost-free period: 50 to 110 days

### **Map Unit Composition**

Poorman and similar soils: 75 percent  
Grandad, dry, and similar soils: 20 percent  
Dissimilar minor components: 5 percent

### **Characteristics of Poorman**

#### **Setting**

Landform: Ridges  
Downslope shape: Convex  
Across-slope shape: Convex  
Aspect (representative): Northwest  
Aspect (range): Southwest to northeast (clockwise)

#### **Properties and qualities**

Parent material: Volcanic ash over colluvium derived from schist  
Slope range: 15 to 35 percent  
Depth to restrictive feature: None within a depth of 60 inches  
Drainage class: Well drained  
Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high  
Flooding frequency: None  
Ponding frequency: None  
Seasonal high water table (minimum depth): More than 72 inches  
Salinity (maximum): Not saline  
Sodicity (maximum): Not sodic  
Available water capacity (entire profile): High (about 10.4 inches)

#### **Interpretive groups**

Land capability subclass (nonirrigated): 6e  
Plant community class: Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy loam  
Bw—3 to 13 inches; ashy loam  
2Bt—13 to 29 inches; loam  
2BC—29 to 36 inches; gravelly loam  
2C1—36 to 52 inches; sandy loam  
2C2—52 to 61 inches; sandy loam

### **Characteristics of Grandad, Dry**

#### **Setting**

Landform: Ridges  
Downslope shape: Linear

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

### ***Dissimilar Minor Components***

#### **Nakarna soils, warm**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

#### **Rettig soils, warm, dry**

*Percentage of map unit:* 1 percent

*Landform:* Ridges, mountain slopes

#### **Scaler soils**

*Percentage of map unit:* 1 percent

*Landform:* Ridges, benches on mountain slopes

## **190—Poorman-Grandad, dry complex, 35 to 65 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,800 to 4,200 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Poorman and similar soils:* 40 percent

*Grandad, dry, and similar soils:* 35 percent

*Dissimilar minor components:* 25 percent

### **Characteristics of Poorman**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.4 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy loam

Bw—3 to 13 inches; ashy loam

2Bt—13 to 29 inches; loam

2BC—29 to 36 inches; gravelly loam

2C1—36 to 52 inches; sandy loam

2C2—52 to 61 inches; sandy loam

### **Characteristics of Grandad, Dry**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlelily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

***Dissimilar Minor Components***

**Poorman soils, dry**

*Percentage of map unit:* 8 percent

*Landform:* Smooth mountain slopes

**Nakarna soils, warm**

*Percentage of map unit:* 7 percent

*Landform:* Sharp, convex mountain slopes

**Township soils**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

**Scaler soils**

*Percentage of map unit:* 3 percent

*Landform:* Benches on mountain slopes

**Tomodo soils**

*Percentage of map unit:* 3 percent

*Landform:* Benches on mountain slopes

**191—Reggear-Kauder complex, 5 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 3,800 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Reggear and similar soils:* 55 percent

*Kauder and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent



### ***Characteristics of Reggear***

#### **Setting**

*Landform:* Structural benches, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 18 to 34 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy silt loam

Bw—8 to 13 inches; ashy silt loam

2E—13 to 22 inches; silt loam

2B/E—22 to 31 inches; silt loam

2Btx1—31 to 60 inches; silt loam

3Btx2—60 to 86 inches; silt loam

### ***Characteristics of Kauder***

#### **Setting**

*Landform:* Structural benches, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* 22 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 13 to 28 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 4 inches; ashy silt loam

Bw—4 to 15 inches; ashy silt loam

2E—15 to 23 inches; silt loam

2B/E—23 to 34 inches; silt loam

3Btx—34 to 95 inches; silty clay loam

***Dissimilar Minor Components***

**Grangemont soils**

*Percentage of map unit:* 6 percent

*Landform:* Concave and smooth hillslopes

**Keeler soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Mushel soils**

*Percentage of map unit:* 3 percent

*Landform:* Sharp, convex mountain slopes

**Gramil soils**

*Percentage of map unit:* 2 percent

*Landform:* Knobs on hillslopes

**Seddow soils**

*Percentage of map unit:* 2 percent

*Landform:* Hillslopes on plateaus

**Statemeadow soils**

*Percentage of map unit:* 2 percent

*Landform:* Hillslopes on plateaus

***192—Reggear-Seddow complex, 5 to 15 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,800 to 3,800 feet

*Mean annual precipitation:* 25 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Reggear and similar soils:* 50 percent

*Seddow and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

### ***Characteristics of Reggear***

#### **Setting**

*Landform:* Structural benches, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 15 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 18 to 34 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy silt loam

Bw—8 to 13 inches; ashy silt loam

2E—13 to 22 inches; silt loam

2B/E—22 to 31 inches; silt loam

2Btx1—31 to 60 inches; silt loam

3Btx2—60 to 86 inches; silt loam

### ***Characteristics of Seddow***

#### **Setting**

*Landform:* Structural benches, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Volcanic ash and loess and/or colluvium derived from basalt

*Slope range:* 5 to 15 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Grand fir/twinflower (CN590)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 5 inches; ashy silt loam

2Bt1—5 to 13 inches; ashy silt loam

2Bt2—13 to 35 inches; silt loam

3Bt3—35 to 44 inches; very gravelly silt loam

3R—44 to 54 inches; unweathered bedrock

***Dissimilar Minor Components***

**Gramil soils**

*Percentage of map unit:* 10 percent

*Landform:* Knobs on benches

**Carlinton soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave areas of benches

**Teneb soils**

*Percentage of map unit:* 3 percent

*Landform:* Drainageways

**Agatha soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex side slopes of canyons

**193—Rettig ashy loam, 35 to 60 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,300 to 5,000 feet

*Mean annual precipitation:* 50 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Rettig, high elevation, and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Rettig, High Elevation***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 35 to 60 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/wild ginger (CN516)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 7 inches; ashy loam  
Bw1—7 to 27 inches; ashy loam  
2Bw2—27 to 34 inches; gravelly sandy loam  
2Bw3—34 to 47 inches; gravelly sandy loam  
2BC—47 to 63 inches; gravelly sandy loam  
2C—63 to 66 inches; very gravelly sandy loam

***Dissimilar Minor Components***

**Jury soils, high elevation**

*Percentage of map unit:* 10 percent  
*Landform:* Convex and smooth mountain slopes

**Stepoff soils**

*Percentage of map unit:* 10 percent  
*Landform:* Concave mountain slopes

**194—Rettig ashy loam, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,400 to 3,800 feet  
*Mean annual precipitation:* 40 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Rettig and similar soils:* 80 percent  
*Dissimilar minor components:* 20 percent

***Characteristics of Rettig***

**Setting**

*Landform:* Ridges, mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

## Soil Survey of Clearwater Area, Idaho

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western hemlock/wild ginger (CN575)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam

2Bw2—27 to 34 inches; gravelly sandy loam

2Bw3—34 to 47 inches; gravelly sandy loam

2BC—47 to 63 inches; gravelly sandy loam

2C—63 to 66 inches; very gravelly sandy loam

### ***Dissimilar Minor Components***

#### **Grandad soils**

*Percentage of map unit:* 10 percent

*Landform:* Broad ridges

#### **Boulder creek soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

#### **Township soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex escarpments on mountain slopes

## ***195—Rettig ashy loam, cold, 15 to 35 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,300 to 4,900 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Rettig, cold, and similar soils:* 90 percent

*Dissimilar minor component:* 10 percent

### ***Characteristics of Rettig, Cold***

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/wild ginger (CN516)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam

2Bw2—27 to 34 inches; gravelly sandy loam

2Bw3—34 to 47 inches; gravelly sandy loam

2BC—47 to 63 inches; gravelly sandy loam

2C—63 to 66 inches; very gravelly sandy loam

### ***Dissimilar Minor Component***

### **Grandad soils, cold**

*Percentage of map unit:* 10 percent

*Landform:* Benches on mountain slopes

## **196—Rettig, cool-Rettig, dry complex, 35 to 65 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,000 to 4,000 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Rettig, cool, and similar soils:* 50 percent

*Rettig, dry, and similar soils:* 40 percent

*Dissimilar minor components:* 10 percent

### ***Characteristics of Rettig, Cool***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave



## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.7 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western hemlock/wild ginger (CN575)

### Typical profile

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 7 inches; ashy loam  
Bw1—7 to 27 inches; ashy loam  
2Bw2—27 to 34 inches; gravelly sandy loam  
2Bw3—34 to 47 inches; gravelly sandy loam  
2BC—47 to 63 inches; gravelly sandy loam  
2C—63 to 66 inches; very gravelly sandy loam

## Characteristics of Rettig, Dry

### Setting

*Landform:* Mountain slopes  
*Downslope shape:* Concave  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.7 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western hemlock/queencup beadlily (CN570)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 7 inches; ashy loam  
Bw1—7 to 27 inches; ashy loam  
2Bw2—27 to 34 inches; gravelly sandy loam  
2Bw3—34 to 47 inches; gravelly sandy loam  
2BC—47 to 63 inches; gravelly sandy loam  
2C—63 to 66 inches; very gravelly sandy loam

***Dissimilar Minor Components***

**Stepoff soils**

*Percentage of map unit:* 5 percent  
*Landform:* Concave draws on mountain slopes

**Township soils**

*Percentage of map unit:* 3 percent  
*Landform:* Convex areas of mountain slopes

**Dullaxe soils**

*Percentage of map unit:* 2 percent  
*Landform:* Smooth mountain slopes

***197—Rettig-Grandad complex, 35 to 70 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,200 to 4,500 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Rettig and similar soils:* 45 percent  
*Grandad and similar soils:* 30 percent  
*Dissimilar minor components:* 25 percent

***Characteristics of Rettig***

**Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist  
*Slope range:* 35 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None

## Soil Survey of Clearwater Area, Idaho

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam

2Bw2—27 to 34 inches; gravelly sandy loam

2Bw3—34 to 47 inches; gravelly sandy loam

2BC—47 to 63 inches; gravelly sandy loam

2C—63 to 66 inches; very gravelly sandy loam

### ***Characteristics of Grandad***

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 35 to 70 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

### ***Dissimilar Minor Components***

#### **Township soils, wet**

*Percentage of map unit:* 12 percent

*Landform:* Mountain slopes

**Nakarna soils**

*Percentage of map unit:* 8 percent

*Landform:* Convex mountain slopes

**Poorman soils, wet**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

**Brodeer soils**

*Percentage of map unit:* 2 percent

*Landform:* Mountain slopes

**198—Rettig-Township complex, 35 to 60 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 4,200 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Rettig, warm, dry, and similar soils:* 60 percent

*Township and similar soils:* 25 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Rettig, Warm, Dry***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 35 to 60 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam  
2Bw2—27 to 34 inches; gravelly sandy loam  
2Bw3—34 to 47 inches; gravelly sandy loam  
2BC—47 to 63 inches; gravelly sandy loam  
2C—63 to 66 inches; very gravelly sandy loam

### ***Characteristics of Township***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist  
*Slope range:* 35 to 60 percent  
*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy silt loam  
Bw1—3 to 17 inches; ashy silt loam  
2Bw2—17 to 35 inches; very flaggy loam  
2Bw3—35 to 43 inches; very cobbly loam  
2BC—43 to 53 inches; extremely cobbly sandy loam  
2C—53 to 66 inches; extremely flaggy sandy loam

### ***Dissimilar Minor Components***

#### **Scand soils**

*Percentage of map unit:* 5 percent  
*Landform:* Structural benches

#### **Grandad soils, dry**

*Percentage of map unit:* 4 percent  
*Landform:* Mountain slopes

#### **Poorman soils, dry**

*Percentage of map unit:* 3 percent  
*Landform:* Ridges

#### **Rock outcrop**

*Percentage of map unit:* 3 percent  
*Landform:* Mountain slopes

## **199—Rettig-Township-Stepoff complex, 35 to 70 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 3,800 to 4,600 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Rettig and similar soils:* 40 percent  
*Township, wet, and similar soils:* 25 percent  
*Stepoff and similar soils:* 15 percent  
*Dissimilar minor components:* 20 percent

### **Characteristics of Rettig**

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Concave  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist  
*Slope range:* 35 to 70 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.7 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 7 inches; ashy loam  
Bw1—7 to 27 inches; ashy loam  
2Bw2—27 to 34 inches; gravelly sandy loam  
2Bw3—34 to 47 inches; gravelly sandy loam  
2BC—47 to 63 inches; gravelly sandy loam  
2C—63 to 66 inches; very gravelly sandy loam

### **Characteristics of Township, Wet**

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over colluvium derived from schist  
*Slope range:* 35 to 70 percent  
*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.5 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/wild ginger (CN545)

### Typical profile

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy silt loam  
Bw1—3 to 17 inches; ashy silt loam  
2Bw2—17 to 35 inches; very flaggy loam  
2Bw3—35 to 43 inches; very cobbly loam  
2BC—43 to 53 inches; extremely cobbly sandy loam  
2C—53 to 66 inches; extremely flaggy sandy loam

### Characteristics of Stepoff

#### Setting

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.9 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Sitka alder/miner's lettuce (CN001)



**Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material  
A—3 to 8 inches; medial loam  
Bw1—8 to 24 inches; medial loam  
2Bw2—24 to 38 inches; gravelly loam  
2Bw3—38 to 46 inches; gravelly loam  
2C—46 to 63 inches; very cobbly loam

***Dissimilar Minor Components***

**Township soils**

*Percentage of map unit:* 12 percent  
*Landform:* Smooth mountain slopes

**Rettig soils, high elevation**

*Percentage of map unit:* 5 percent  
*Landform:* Smooth mountain slopes

**Brodeer soils, dry**

*Percentage of map unit:* 3 percent  
*Landform:* Mountain slopes

***200—Riswold-Cranberry complex, 5 to 20 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,500 to 3,400 feet  
*Mean annual precipitation:* 30 to 40 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Riswold and similar soils:* 50 percent  
*Cranberry and similar soils:* 45 percent  
*Dissimilar minor components:* 5 percent

***Characteristics of Riswold***

**Setting**

*Landform:* Hillslopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt  
*Slope range:* 5 to 20 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches

## Soil Survey of Clearwater Area, Idaho

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.4 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### Typical profile

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 9 inches; ashy silt loam

Bw—9 to 17 inches; ashy silt loam

2E/B—17 to 27 inches; silt loam

2B/E—27 to 44 inches; silt loam

3Bt1—44 to 60 inches; cobbly silty clay loam

3Bt2—60 to 72 inches; very cobbly silty clay loam

## Characteristics of Cranberry

### Setting

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 5 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### Typical profile

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 5 inches; ashy silt loam

Bw1—5 to 11 inches; ashy silt loam

Bw2—11 to 16 inches; ashy silt loam

2Bt1—16 to 22 inches; silt loam

2Bt2—22 to 32 inches; silt loam

2Bt3—32 to 40 inches; silty clay loam

2Bt4—40 to 50 inches; silty clay loam

3Btb1—50 to 57 inches; clay loam

3Btb2—57 to 62 inches; clay loam

***Dissimilar Minor Components***

**Elkridge soils**

*Percentage of map unit:* 3 percent  
*Landform:* Steep, convex hillslopes

**Jaype soils**

*Percentage of map unit:* 2 percent  
*Landform:* Hillslopes

**201—Riswold-Grangemont complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,000 to 3,450 feet  
*Mean annual precipitation:* 35 to 50 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Riswold and similar soils:* 45 percent  
*Grangemont and similar soils:* 40 percent  
*Dissimilar minor components:* 15 percent

***Characteristics of Riswold***

**Setting**

*Landform:* Structural benches, hillslopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 11.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 9 inches; ashy silt loam

Bw—9 to 17 inches; ashy silt loam  
2E/B—17 to 27 inches; silt loam  
2B/E—27 to 44 inches; silt loam  
3Bt1—44 to 60 inches; cobbly silty clay loam  
3Bt2—60 to 72 inches; very cobbly silty clay loam

### ***Characteristics of Grangemont***

#### **Setting**

*Landform:* Structural benches, hillslopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Northwest  
*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over reworked loess  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 18.8 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
Oe—2 to 3 inches; moderately decomposed plant material  
A—3 to 7 inches; ashy silt loam  
Bw—7 to 14 inches; ashy silt loam  
2B/E—14 to 38 inches; silt loam  
2Bt—38 to 95 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Riswold soils, dry**

*Percentage of map unit:* 5 percent  
*Landform:* Hillslopes

#### **Elkridge soils**

*Percentage of map unit:* 3 percent  
*Landform:* Ridges

#### **Kauder soils**

*Percentage of map unit:* 3 percent  
*Landform:* Hillslopes, benches in canyons

#### **Norwidge soils**

*Percentage of map unit:* 2 percent  
*Landform:* Hillslopes

#### **Placer soils**

*Percentage of map unit:* 2 percent  
*Landform:* Convex hillslopes

**202—Rock outcrop-Whiskeycreek-Texas creek complex,  
40 to 70 percent slopes**

**Map Unit Setting**

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 3,100 feet

*Mean annual precipitation:* 24 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

**Map Unit Composition**

*Rock outcrop:* 35 percent

*Whiskeycreek and similar soils:* 30 percent

*Texas creek, dry, and similar soils:* 25 percent

*Dissimilar minor components:* 10 percent

**Characteristics of Rock Outcrop**

*Description of areas:* Exposures of bare bedrock

**Characteristics of Whiskeycreek**

**Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

**Properties and qualities**

*Parent material:* Colluvium derived from granite and/or gneiss

*Slope range:* 40 to 70 percent

*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very low (about 1.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Ecological site:* SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE  
(R009XY026ID)

**Typical profile**

A—0 to 4 inches; coarse sandy loam

Bw—4 to 9 inches; coarse sandy loam

C—9 to 15 inches; gravelly loamy coarse sand

R—15 to 25 inches; unweathered bedrock

**Characteristics of Texas creek, Dry**

**Setting**

*Landform:* Canyons

*Downslope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Concave  
*Aspect (representative):* South  
*Aspect (range):* East to west (clockwise)

### **Properties and qualities**

*Parent material:* Loess over residuum derived from gneiss, granite, and/or schist  
*Slope range:* 40 to 70 percent  
*Depth to restrictive feature:* 20 to 40 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Low (about 5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e  
*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 13 inches; loam  
Bw—13 to 25 inches; gravelly loam  
C—25 to 33 inches; gravelly sandy loam  
Cr—33 to 43 inches; weathered bedrock

### ***Dissimilar Minor Components***

#### **Johnson soils**

*Percentage of map unit:* 5 percent  
*Landform:* Concave side slopes of canyons

#### **Newlig soils**

*Percentage of map unit:* 2 percent  
*Landform:* Terrace remnants in canyons

#### **Ahsahka soils, dry**

*Percentage of map unit:* 1 percent  
*Landform:* Convex side slopes of canyons

#### **Fordcreek soils**

*Percentage of map unit:* 1 percent  
*Landform:* Benches in canyons

#### **Oxyaquic Xerofluvents, occasionally flooded**

*Percentage of map unit:* 1 percent  
*Landform:* Flood plains

## **203—Scaler ashy silt loam, 15 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,800 to 3,400 feet  
*Mean annual precipitation:* 30 to 40 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Scaler and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Scaler**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* West

*Aspect (range):* South to north (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beادلily (CN530)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 2 inches; ashy silt loam

Bw—2 to 11 inches; ashy silt loam

2E—11 to 18 inches; silt loam

2E/B—18 to 30 inches; silt loam

2B/E—30 to 40 inches; silt loam

3Bt—40 to 48 inches; paragravelly loam

3C—48 to 65 inches; very paragravelly loamy sand

### **Dissimilar Minor Components**

#### **Grandad soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave and smooth mountain slopes

#### **Grangemont soils**

*Percentage of map unit:* 5 percent

*Landform:* Smooth mountain slopes, benches on mountain slopes

#### **Scand soils**

*Percentage of map unit:* 5 percent

*Landform:* Structural benches



## **204—Scaler-Grandad complex, 35 to 60 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,950 to 3,500 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Scaler and similar soils:* 60 percent

*Grandad and similar soils:* 20 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Scaler**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to northwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from schist and/or gneiss

*Slope range:* 35 to 45 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 2 inches; ashy silt loam

Bw—2 to 11 inches; ashy silt loam

2E—11 to 18 inches; silt loam

2E/B—18 to 30 inches; silt loam

2B/E—30 to 40 inches; silt loam

3Bt—40 to 48 inches; paragravelly loam

3C—48 to 65 inches; very paragravelly loamy sand

### **Characteristics of Grandad**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to north (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 35 to 60 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; loam

2Bt2—30 to 39 inches; gravelly loam

2BC—39 to 45 inches; gravelly loam

2C1—45 to 58 inches; loam

2C2—58 to 64 inches; paragravelly sandy loam

### ***Dissimilar Minor Components***

#### **Grandad soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Smooth mountain slopes

#### **Scand soils**

*Percentage of map unit:* 6 percent

*Landform:* Mountain slopes

#### **Poorman soils**

*Percentage of map unit:* 2 percent

*Landform:* Mountain slopes

#### **Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Mountain slopes

## **205—Scaler-Grangemont complex, 15 to 45 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,000 to 3,300 feet

*Mean annual precipitation:* 40 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Scaler and similar soils:* 60 percent

*Grangemont and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Scaler**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* East

*Aspect (range):* North to south (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 45 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 2 inches; ashy silt loam

Bw—2 to 11 inches; ashy silt loam

2E—11 to 18 inches; silt loam

2E/B—18 to 30 inches; silt loam

2B/E—30 to 40 inches; silt loam

3Bt—40 to 48 inches; paragravelly loam

3C—48 to 65 inches; very paragravelly loamy sand

### **Characteristics of Grangemont**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* East

*Aspect (range):* North to south (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 15 to 30 percent

*Depth to restrictive feature:* None within a depth of 60 inches

## Soil Survey of Clearwater Area, Idaho

*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 18.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
Oe—2 to 3 inches; moderately decomposed plant material  
A—3 to 7 inches; ashy silt loam  
Bw—7 to 14 inches; ashy silt loam  
2B/E—14 to 38 inches; silt loam  
2Bt—38 to 95 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Threebear soils**

*Percentage of map unit:* 6 percent  
*Landform:* Mountain slopes

#### **Aldermant soils**

*Percentage of map unit:* 2 percent  
*Landform:* Mountain slopes

#### **Poorman soils**

*Percentage of map unit:* 2 percent  
*Landform:* Mountain slopes

## **206—Scand-Scaler complex, 15 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,900 to 3,300 feet  
*Mean annual precipitation:* 35 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Scand and similar soils:* 65 percent  
*Scaler and similar soils:* 15 percent  
*Dissimilar minor components:* 20 percent

### ***Characteristics of Scand***

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Northeast

*Aspect (range):* Northwest to southeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from mica schist and/or gneiss

*Slope range:* 20 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.4 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 4 inches; ashy silt loam

Bw—4 to 16 inches; ashy silt loam

2Bt1—16 to 27 inches; silt loam

3Bt2—27 to 53 inches; loam

3BC—53 to 63 inches; loamy sand

## ***Characteristics of Scaler***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* Northeast

*Aspect (range):* Northwest to southeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 2 inches; ashy silt loam

Bw—2 to 11 inches; ashy silt loam  
2E—11 to 18 inches; silt loam  
2E/B—18 to 30 inches; silt loam  
2B/E—30 to 40 inches; silt loam  
3Bt—40 to 48 inches; paragravelly loam  
3C—48 to 65 inches; very paragravelly loamy sand

***Dissimilar Minor Components***

**Grandad soils, dry**

*Percentage of map unit:* 10 percent  
*Landform:* Sharp, convex mountain slopes

**Grandad soils**

*Percentage of map unit:* 5 percent  
*Landform:* Sharp, convex mountain slopes

**Norwidge soils**

*Percentage of map unit:* 5 percent  
*Landform:* Structural benches on mountain slopes

***207—Seddow ashy silt loam, 15 to 25 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,400 to 3,100 feet  
*Mean annual precipitation:* 25 to 30 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Seddow and similar soils:* 75 percent  
*Dissimilar minor components:* 25 percent

***Characteristics of Seddow***

**Setting**

*Landform:* Hillslopes, structural benches  
*Geomorphic position (two-dimensional):* Shoulders  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Southwest  
*Aspect (range):* Southeast to northwest (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and loess and/or colluvium derived from basalt  
*Slope range:* 15 to 25 percent  
*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/twinflower (CN590)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw—3 to 5 inches; ashy silt loam

2Bt1—5 to 13 inches; ashy silt loam

2Bt2—13 to 35 inches; silt loam

3Bt3—35 to 44 inches; very gravelly silt loam

3R—44 to 54 inches; unweathered bedrock

***Dissimilar Minor Components***

**Agatha soils**

*Percentage of map unit:* 10 percent

*Landform:* Side slopes of canyons

**Elkridge soils**

*Percentage of map unit:* 6 percent

*Landform:* Valleysides

**Riswold soils**

*Percentage of map unit:* 5 percent

*Landform:* Steep escarpments in canyons

**Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas on side slopes of canyons

**Wilkins soils**

*Percentage of map unit:* 2 percent

*Landform:* Drainageways

**208—Seddow ashy silt loam, 25 to 50 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,400 to 3,100 feet

*Mean annual precipitation:* 25 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Seddow and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Seddow***

**Setting**

*Landform:* Structural benches, hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)



**Properties and qualities**

*Parent material:* Volcanic ash and loess and/or colluvium derived from basalt  
*Slope range:* 25 to 50 percent  
*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/twinflower (CN590)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy silt loam  
Bw—3 to 5 inches; ashy silt loam  
2Bt1—5 to 13 inches; ashy silt loam  
2Bt2—13 to 35 inches; silt loam  
3Bt3—35 to 44 inches; very gravelly silt loam  
3R—44 to 54 inches; unweathered bedrock

***Dissimilar Minor Components***

**Agatha soils**

*Percentage of map unit:* 10 percent  
*Landform:* Side slopes of canyons

**Riswold soils, dry**

*Percentage of map unit:* 5 percent  
*Landform:* Hillslopes on plateaus

**209—Seddow ashy silt loam, 5 to 15 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,100 to 3,200 feet  
*Mean annual precipitation:* 25 to 30 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Seddow and similar soils:* 80 percent  
*Dissimilar minor components:* 20 percent

***Characteristics of Seddow***

**Setting**

*Landform:* Structural benches, hillslopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash and loess and/or colluvium derived from basalt  
*Slope range:* 5 to 15 percent  
*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 7.4 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e  
*Plant community class:* Grand fir/twinflower (CN590)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material  
A—1 to 3 inches; ashy silt loam  
Bw—3 to 5 inches; ashy silt loam  
2Bt1—5 to 13 inches; ashy silt loam  
2Bt2—13 to 35 inches; silt loam  
3Bt3—35 to 44 inches; very gravelly silt loam  
3R—44 to 54 inches; unweathered bedrock

***Dissimilar Minor Components***

**Reggear soils**

*Percentage of map unit:* 6 percent  
*Landform:* Hills on plateaus

**Agatha soils**

*Percentage of map unit:* 5 percent  
*Landform:* Side slopes of canyons

**Carlinton soils**

*Percentage of map unit:* 5 percent  
*Landform:* Hills

**Newlig soils**

*Percentage of map unit:* 4 percent  
*Landform:* Concave terraces

**210—Setters silt loam, 3 to 8 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,800 to 3,100 feet  
*Mean annual precipitation:* 24 to 27 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Setters and similar soils:* 80 percent  
*Dissimilar minor components:* 20 percent

### **Characteristics of Setters**

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 3 to 8 percent

*Depth to restrictive feature:* 8 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 13 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Douglas-fir/common snowberry (CN310)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; silt loam

Bt—15 to 28 inches; silt loam

E—28 to 34 inches; silt loam

Btb—34 to 62 inches; silty clay

### **Dissimilar Minor Components**

#### **Wilkins soils**

*Percentage of map unit:* 10 percent

*Landform:* Swales

#### **Joel soils**

*Percentage of map unit:* 5 percent

*Landform:* Hills on plateaus

#### **Taney soils**

*Percentage of map unit:* 3 percent

*Landform:* Undulating plateaus

#### **Cavendish soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills on plateaus

## **211—Shattuck ashy silt loam, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,800 to 4,800 feet

*Mean annual precipitation:* 45 to 55 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Shattuck and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Shattuck**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northeast

*Aspect (range):* Northwest to southeast (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; gravelly clay loam

2Bt2—30 to 63 inches; extremely cobbly clay loam

### **Dissimilar Minor Components**

#### **Dworshak soils**

*Percentage of map unit:* 9 percent

*Landform:* Mountain slopes

#### **Boulder creek soils**

*Percentage of map unit:* 1 percent

*Landform:* Sharp, convex mountain slopes

## **212—Shattuck ashy silt loam, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,400 to 4,400 feet

*Mean annual precipitation:* 45 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Shattuck and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Shattuck**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; gravelly clay loam

2Bt2—30 to 63 inches; extremely cobbly clay loam

### **Dissimilar Minor Components**

#### **Boulder creek soils**

*Percentage of map unit:* 5 percent

*Landform:* Smooth and concave mountain slopes

#### **Dworshak soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

## **213—Shattuck ashy silt loam, moist, 35 to 65 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 3,600 to 4,400 feet  
*Mean annual precipitation:* 45 to 55 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Shattuck, moist, and similar soils:* 90 percent  
*Dissimilar minor component:* 10 percent

### **Characteristics of Shattuck, Moist**

#### **Setting**

*Landform:* Ridges, mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* North  
*Aspect (range):* West to east (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite  
*Slope range:* 35 to 65 percent  
*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material  
A—2 to 7 inches; ashy silt loam  
Bw—7 to 19 inches; ashy silt loam  
2Bt1—19 to 30 inches; gravelly clay loam  
2Bt2—30 to 63 inches; extremely cobbly clay loam

### **Dissimilar Minor Component**

#### **Boulder creek soils, moist**

*Percentage of map unit:* 10 percent  
*Landform:* Convex mountain slopes

## **214—Shattuck-Dworshak complex, moist, 15 to 40 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 4,200 to 4,500 feet  
*Mean annual precipitation:* 50 to 55 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Shattuck, moist, and similar soils:* 50 percent

*Dworshak, moist, and similar soils:* 40 percent

*Dissimilar minor components:* 10 percent

### **Characteristics of Shattuck, Moist**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* East

*Aspect (range):* North to south (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; gravelly clay loam

2Bt2—30 to 63 inches; extremely cobbly clay loam

### **Characteristics of Dworshak, Moist**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* East

*Aspect (range):* Northeast to south (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 15 to 40 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained



## Soil Survey of Clearwater Area, Idaho

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 11 inches; ashy silt loam

Bw—11 to 18 inches; ashy silt loam

2E/Bt—18 to 31 inches; silt loam

3Bt—31 to 63 inches; very gravelly clay loam

### ***Dissimilar Minor Components***

#### **Boulder creek soils**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

#### **Brodeer soils**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

#### **Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas of mountain slopes

## **215—Shattuck-Dworshak complex, 15 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,200 to 4,400 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### ***Map Unit Composition***

*Shattuck and similar soils:* 60 percent

*Dworshak and similar soils:* 35 percent

*Dissimilar minor component:* 5 percent

### ***Characteristics of Shattuck***

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* East

*Aspect (range):* North to south (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 21 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 7 inches; ashy silt loam

Bw—7 to 19 inches; ashy silt loam

2Bt1—19 to 30 inches; gravelly clay loam

2Bt2—30 to 63 inches; extremely cobbly clay loam

***Characteristics of Dworshak***

**Setting**

*Landform:* Ridges

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* East

*Aspect (range):* North to south (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

Oe—2 to 3 inches; moderately decomposed plant material

A—3 to 11 inches; ashy silt loam

Bw—11 to 18 inches; ashy silt loam

2E/Bt—18 to 31 inches; silt loam

3Bt—31 to 63 inches; very gravelly clay loam

***Dissimilar Minor Component***

**Hugus soils**

*Percentage of map unit:* 5 percent

*Landform:* Broad ridges

**216—Sly-Wilkins complex, 3 to 15 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus, canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,900 to 2,900 feet

*Mean annual precipitation:* 28 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Sly and similar soils:* 80 percent

*Wilkins and similar soils:* 15 percent

*Dissimilar minor component:* 5 percent

***Characteristics of Sly***

**Setting**

*Landform:* Rims, structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 3 to 15 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 4 inches; slightly decomposed plant material

A—4 to 8 inches; ashy silt loam

Bw—8 to 19 inches; ashy silt loam

Bt1—19 to 28 inches; silty clay loam

Bt2—28 to 37 inches; silty clay loam

C—37 to 66 inches; cobbly clay loam

### ***Characteristics of Wilkins***

#### **Setting**

*Landform:* Structural benches, swales

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Mixed alluvium and/or loess

*Slope range:* 3 to 5 percent

*Depth to restrictive feature:* 15 to 30 inches to an abrupt textural change

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 13 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3w

*Ecological site:* DRY MEADOW (R009XY019ID)

#### **Typical profile**

A—0 to 15 inches; silt loam

E—15 to 20 inches; silt loam

2Bt—20 to 52 inches; silty clay

3BC—52 to 64 inches; clay loam

### ***Dissimilar Minor Component***

#### **Campra soils**

*Percentage of map unit:* 5 percent

*Landform:* Canyons

## **217—Southwick silt loam, 3 to 12 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,700 to 3,100 feet

*Mean annual precipitation:* 23 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### ***Map Unit Composition***

*Southwick and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### ***Characteristics of Southwick***

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Loess

*Slope range:* 3 to 12 percent

*Depth to restrictive feature:* 24 to 38 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 18 to 36 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 17 inches; silt loam

E—17 to 26 inches; silt loam

Btxb—26 to 61 inches; silty clay loam

***Dissimilar Minor Components***

**Driscoll soils**

*Percentage of map unit:* 5 percent

*Landform:* Ridges of hills on plateaus

**Larkin soils**

*Percentage of map unit:* 5 percent

*Landform:* Ridges, convex hillslopes

**Kettenbach soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex side slopes of canyons

**Latahco soils**

*Percentage of map unit:* 2 percent

*Landform:* Drainageways

***218—Southwick-Larkin complex, 12 to 25 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 2,300 to 3,400 feet

*Mean annual precipitation:* 23 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Southwick and similar soils:* 45 percent  
*Larkin and similar soils:* 40 percent  
*Dissimilar minor components:* 15 percent

### **Characteristics of Southwick**

#### **Setting**

*Landform:* Hillslopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* Southeast  
*Aspect (range):* Northeast to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Loess  
*Slope range:* 12 to 20 percent  
*Depth to restrictive feature:* 24 to 38 inches to a fragipan  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* About 18 to 36 inches (see Water Features table)  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* High (about 10.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Ponderosa pine/common snowberry (CN170)

#### **Typical profile**

A—0 to 9 inches; silt loam  
Bw—9 to 26 inches; silt loam  
E—26 to 32 inches; silt loam  
Btxb—32 to 46 inches; silty clay loam  
Btb—46 to 64 inches; silty clay loam

### **Characteristics of Larkin**

#### **Setting**

*Landform:* Hillslopes  
*Downslope shape:* Convex  
*Across-slope shape:* Linear  
*Aspect (representative):* Southeast  
*Aspect (range):* Northeast to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over colluvium derived from basalt  
*Slope range:* 12 to 25 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 12.2 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e  
*Plant community class:* Ponderosa pine/common snowberry (CN170)

**Typical profile**

A—0 to 19 inches; silt loam  
Bt—19 to 61 inches; silty clay loam

***Dissimilar Minor Components***

**Driscoll soils**

*Percentage of map unit:* 10 percent  
*Landform:* Ridges and hills on plateaus

**Latahco soils**

*Percentage of map unit:* 5 percent  
*Landform:* Drainageways

**219—Statemeadow-Reggear complex, 5 to 15 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 2,800 to 3,200 feet  
*Mean annual precipitation:* 30 to 45 inches  
*Mean annual air temperature:* 38 to 44 degrees F  
*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Statemeadow and similar soils:* 65 percent  
*Reggear and similar soils:* 25 percent  
*Dissimilar minor components:* 10 percent

***Characteristics of Statemeadow***

**Setting**

*Landform:* Hills  
*Downslope shape:* Convex  
*Across-slope shape:* Linear  
*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash and loess over colluvium derived from basalt  
*Slope range:* 5 to 15 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline



## Soil Survey of Clearwater Area, Idaho

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; ashy silt loam

Bw—2 to 9 inches; ashy silt loam

Bt1—9 to 51 inches; silt loam

2Bt2—51 to 61 inches; silty clay loam

## ***Characteristics of Reggear***

### **Setting**

*Landform:* Hills

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

### **Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 15 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 18 to 34 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Grand fir/queencup beadlily (CN520)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; ashy silt loam

Bw—8 to 13 inches; ashy silt loam

2E—13 to 22 inches; silt loam

2B/E—22 to 31 inches; silt loam

2Btx1—31 to 60 inches; silt loam

3Btx2—60 to 86 inches; silt loam

## ***Dissimilar Minor Components***

### **Campra soils**

*Percentage of map unit:* 5 percent

*Landform:* Hills

### **Grangemont soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave hillslopes

## **220—Swayne silt loam, 10 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 2,800 feet

*Mean annual precipitation:* 23 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Swayne and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Swayne**

#### **Setting**

*Landform:* Hills

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Southeast

*Aspect (range):* Northeast to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or alluvium derived from granite

*Slope range:* 10 to 35 percent

*Depth to restrictive feature:* 14 to 60 inches to an abrupt textural change

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.3 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Douglas-fir/ninebark (CN260)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 8 inches; silt loam

BA—8 to 14 inches; silty clay loam

B/E—14 to 22 inches; silty clay loam

Bt1—22 to 56 inches; silty clay loam

2Bt2—56 to 61 inches; clay loam

### **Dissimilar Minor Components**

#### **Fordcreek soils**

*Percentage of map unit:* 5 percent

*Landform:* Concave areas of benches in canyons

#### **Johnson soils**

*Percentage of map unit:* 5 percent

*Landform:* Convex side slopes of canyons

**Klickson soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of benches

**Ahsahka soils**

*Percentage of map unit:* 1 percent

*Landform:* Convex side slopes of canyons

**Keuterville soils**

*Percentage of map unit:* 1 percent

*Landform:* Footslopes above benches

**221—Taney ashy silt loam, 3 to 10 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 2,000 to 3,500 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Taney and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Taney***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess

*Slope range:* 3 to 10 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 16 to 37 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Douglas-fir/common snowberry (CN310)

**Typical profile**

A—0 to 10 inches; ashy silt loam

Bw—10 to 31 inches; silt loam

Btxb—31 to 60 inches; silty clay loam

***Dissimilar Minor Components***

**Joel soils**

*Percentage of map unit:* 10 percent

*Landform:* Hillslopes

**Setters soils**

*Percentage of map unit:* 5 percent

*Landform:* Hillslopes, ridges

**Wilkins soils**

*Percentage of map unit:* 3 percent

*Landform:* Swales

**Cavendish soils**

*Percentage of map unit:* 2 percent

*Landform:* Hillslopes

***222—Taney-Joel complex, 10 to 20 percent slopes***

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 2,300 to 3,500 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Taney and similar soils:* 50 percent

*Joel and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Taney***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* West

*Aspect (range):* South to north (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess

*Slope range:* 10 to 20 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 24 to 30 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/common snowberry (CN310)

**Typical profile**

A—0 to 14 inches; ashy silt loam

Bw—14 to 23 inches; silt loam

E—23 to 29 inches; silt loam

Btxb—29 to 36 inches; silty clay loam

Btb—36 to 63 inches; silty clay

***Characteristics of Joel***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* West

*Aspect (range):* South to north (clockwise)

**Properties and qualities**

*Parent material:* Loess

*Slope range:* 10 to 20 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/ninebark (CN260)

**Typical profile**

A—0 to 18 inches; silt loam

Bt1—18 to 24 inches; silt loam

Bt2—24 to 60 inches; silty clay loam

***Dissimilar Minor Components***

**Setters soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches on hillslopes

**Wilkins soils**

*Percentage of map unit:* 5 percent

*Landform:* Swales

**223—Taney-McCrosket complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains, canyonlands

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 2,600 to 3,600 feet  
*Mean annual precipitation:* 25 to 27 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Taney and similar soils:* 65 percent  
*McCrosket and similar soils:* 25 percent  
*Dissimilar minor components:* 10 percent

### **Characteristics of Taney**

#### **Setting**

*Landform:* Structural benches, mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (representative):* South  
*Aspect (range):* East to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* 20 to 40 inches to a fragipan  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Low  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* About 16 to 37 inches (see Water Features table)  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Douglas-fir/common snowberry (CN310)

#### **Typical profile**

A—0 to 10 inches; ashy silt loam  
Bw—10 to 31 inches; silt loam  
Btxb—31 to 60 inches; silty clay loam

### **Characteristics of McCrosket**

#### **Setting**

*Landform:* Mountain slopes  
*Downslope shape:* Linear  
*Across-slope shape:* Convex  
*Aspect (representative):* South  
*Aspect (range):* East to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess over residuum derived from metasedimentary rock  
*Slope range:* 15 to 35 percent  
*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

## Soil Survey of Clearwater Area, Idaho

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Douglas-fir/common snowberry (CN310)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; gravelly silt loam

Bw1—15 to 35 inches; extremely cobbly loam

Bw2—35 to 48 inches; extremely cobbly loam

Cr—48 to 58 inches; weathered bedrock

### ***Dissimilar Minor Components***

#### **Joel soils**

*Percentage of map unit:* 3 percent

*Landform:* Concave hillsides on plateaus

#### **Noil soils**

*Percentage of map unit:* 3 percent

*Landform:* Smooth and convex mountain slopes

#### **Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas on side slopes

#### **Seddow soils**

*Percentage of map unit:* 2 percent

*Landform:* Hillslopes on plateaus, benches in canyons

## **224—Taney-Setters complex, 3 to 8 percent slopes**

### ***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,800 to 3,100 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### ***Map Unit Composition***

*Taney and similar soils:* 55 percent

*Setters and similar soils:* 35 percent

*Dissimilar minor components:* 10 percent

### ***Characteristics of Taney***

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear



## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Linear

*Aspect (range):* All aspects

### **Properties and qualities**

*Parent material:* Volcanic ash and/or loess

*Slope range:* 3 to 8 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 16 to 37 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.6 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Douglas-fir/common snowberry (CN310)

### **Typical profile**

A—0 to 10 inches; ashy silt loam

Bw—10 to 31 inches; silt loam

Btxb—31 to 60 inches; silty clay loam

## **Characteristics of Setters**

### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 3 to 8 percent

*Depth to restrictive feature:* 8 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* Occasional (see Water Features table)

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 13 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Plant community class:* Douglas-fir/common snowberry (CN310)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; silt loam

Bt—15 to 28 inches; silt loam

E—28 to 34 inches; silt loam

Btb—34 to 62 inches; silty clay

***Dissimilar Minor Components***

**Cavendish soils**

*Percentage of map unit:* 7 percent

*Landform:* Hills on plateaus

**Joel soils**

*Percentage of map unit:* 3 percent

*Landform:* Hills on plateaus

**225—Taney-Setters complex, 8 to 20 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 1,800 to 3,000 feet

*Mean annual precipitation:* 24 to 27 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Taney and similar soils:* 40 percent

*Setters and similar soils:* 40 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Taney***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Convex

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash and/or loess

*Slope range:* 8 to 20 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 16 to 37 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.6 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/common snowberry (CN310)

**Typical profile**

A—0 to 10 inches; ashy silt loam

Bw—10 to 31 inches; silt loam

Btxb—31 to 60 inches; silty clay loam

### **Characteristics of Setters**

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

#### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 8 to 20 percent

*Depth to restrictive feature:* 8 to 45 inches to an abrupt textural change

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 13 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Douglas-fir/common snowberry (CN310)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 15 inches; silt loam

Bt—15 to 28 inches; silt loam

E—28 to 34 inches; silt loam

Btb—34 to 62 inches; silty clay

### **Dissimilar Minor Components**

#### **Joel soils**

*Percentage of map unit:* 12 percent

*Landform:* Hillslopes

#### **Cavendish soils**

*Percentage of map unit:* 5 percent

*Landform:* Hillslopes

#### **Klickson soils**

*Percentage of map unit:* 3 percent

*Landform:* Canyons

## **226—Teakean ash silt loam, 35 to 50 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,800 to 3,800 feet

*Mean annual precipitation:* 28 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

**Map Unit Composition**

*Teakean and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

**Characteristics of Teakean**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

**Properties and qualities**

*Parent material:* Loess over loamy colluvium derived from metamorphic rock

*Slope range:* 35 to 50 percent

*Depth to restrictive feature:* 40 to 60 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 16 to 26 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 9.3 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 13 inches; ashy silt loam

Bt—13 to 23 inches; silty clay loam

B/E—23 to 42 inches; gravelly clay loam

Btx—42 to 61 inches; gravelly clay loam

**Dissimilar Minor Components**

**Carlinton soils**

*Percentage of map unit:* 10 percent

*Landform:* Hillslopes, structural benches

**McCrosket soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Setters soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches on hillslopes

**227—Teneb ashy silt loam, 0 to 2 percent slopes**

**Map Unit Setting**

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 2,900 to 3,300 feet

*Mean annual precipitation:* 32 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Teneb and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Teneb**

#### **Setting**

*Landform:* Drainageways

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Mixed alluvium

*Slope range:* 0 to 2 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* Frequent (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 4 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.4 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4w

*Ecological site:* MEADOW (R009XY018ID)

#### **Typical profile**

A—0 to 7 inches; ashy silt loam

Btg—7 to 24 inches; silty clay loam

EB—24 to 34 inches; silt loam

Btb—34 to 64 inches; silty clay loam

### **Dissimilar Minor Components**

#### **Aquandic Endoaquepts**

*Percentage of map unit:* 8 percent

*Landform:* Drainageways

#### **Caseycreek soils**

*Percentage of map unit:* 4 percent

*Landform:* Low stream terraces

#### **Statemeadow soils**

*Percentage of map unit:* 2 percent

*Landform:* Terraces

#### **Lewhand soils**

*Percentage of map unit:* 1 percent

*Landform:* Drainageways

## **228—Texascreek-Rock outcrop complex, 45 to 75 percent slopes**

### **Map Unit Setting**

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 3,000 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

### **Map Unit Composition**

*Texascreek and similar soils:* 55 percent

*Rock outcrop:* 25 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Texascreek**

#### **Setting**

*Landform:* Canyons

*Geomorphic position (three-dimensional):* Side slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

#### **Properties and qualities**

*Parent material:* Loess over residuum derived from gneiss, granite, and/or schist

*Slope range:* 45 to 75 percent

*Depth to restrictive feature:* 20 to 40 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 8e

*Plant community class:* Douglas-fir/common snowberry (CN310)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 13 inches; loam

Bw—13 to 25 inches; gravelly loam

C—25 to 33 inches; gravelly sandy loam

Cr—33 to 43 inches; weathered bedrock

### **Characteristics of Rock Outcrop**

*Description of areas:* Exposures of bare bedrock

***Dissimilar Minor Components***

**Johnson soils**

*Percentage of map unit:* 9 percent

*Landform:* Canyons

**Texascreek soils, moist**

*Percentage of map unit:* 4 percent

*Landform:* Canyons

**Whiskeycreek soils**

*Percentage of map unit:* 4 percent

*Landform:* Canyons

**Uvi soils**

*Percentage of map unit:* 2 percent

*Landform:* Mountain slopes

**Fordcreek soils**

*Percentage of map unit:* 1 percent

*Landform:* Benches in canyons

***229—Texascreek-Whiskeycreek complex, 35 to 75 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 3,100 feet

*Mean annual precipitation:* 24 to 35 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Texascreek, dry, and similar soils:* 45 percent

*Whiskeycreek and similar soils:* 35 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Texascreek, Dry***

**Setting**

*Landform:* Canyons

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* South

*Aspect (range):* East to southwest (clockwise)

**Properties and qualities**

*Parent material:* Loess over residuum derived from gneiss, granite, and/or schist

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 20 to 40 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches



## Soil Survey of Clearwater Area, Idaho

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 13 inches; loam

Bw—13 to 25 inches; gravelly loam

C—25 to 33 inches; gravelly sandy loam

Cr—33 to 43 inches; weathered bedrock

## ***Characteristics of Whiskeycreek***

### **Setting**

*Landform:* Canyons

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to southwest (clockwise)

### **Properties and qualities**

*Parent material:* Colluvium derived from granite and/or gneiss

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very low (about 1.1 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE  
(R009XY026ID)

### **Typical profile**

A—0 to 4 inches; coarse sandy loam

Bw—4 to 9 inches; coarse sandy loam

C—9 to 15 inches; gravelly loamy coarse sand

R—15 to 25 inches; unweathered bedrock

## ***Dissimilar Minor Components***

### **Fordcreek soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches in canyons

### **Ahsahka soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Concave side slopes of canyons

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas on side slopes of canyons

**230—Norwidge-Threebear complex, 5 to 25 percent slopes**

***Map Unit Setting***

*General landscape:* Plateaus

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,800 to 3,400 feet

*Mean annual precipitation:* 35 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Norwidge and similar soils:* 45 percent

*Threebear and similar soils:* 45 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Norwidge***

**Setting**

*Landform:* Hillslopes

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to northwest (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loess and/or reworked loess

*Slope range:* 5 to 25 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 19.8 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

**Typical profile**

Oi—0 to 3 inches; slightly decomposed plant material

A—3 to 6 inches; medial silt loam

Bw—6 to 17 inches; medial silt loam

2E—17 to 26 inches; silt loam

2Bt/E—26 to 42 inches; silty clay loam

3Btx—42 to 81 inches; silty clay loam

### ***Characteristics of Threebear***

#### **Setting**

*Landform:* Hillslopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to northwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 25 percent

*Depth to restrictive feature:* 20 to 40 inches to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* About 4 to 28 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 10.6 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 4e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; medial silt loam

Bw—3 to 18 inches; medial silt loam

2E/B—18 to 26 inches; silt loam

2B/E—26 to 40 inches; silt loam

2Btx—40 to 69 inches; silty clay loam

### ***Dissimilar Minor Components***

#### **Grangemont soils**

*Percentage of map unit:* 6 percent

*Landform:* Hillslopes

#### **Riswold soils**

*Percentage of map unit:* 4 percent

*Landform:* Hillslopes

## ***231—Tomodo ashy silt loam, dry, 20 to 40 percent slopes***

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 2,100 to 3,700 feet

*Mean annual precipitation:* 35 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

**Map Unit Composition**

*Tomodo and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

**Characteristics of Tomodo**

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Southwest

*Aspect (range):* Southeast to northwest (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over loamy colluvium derived from metamorphic rock

*Slope range:* 20 to 40 percent

*Depth to restrictive feature:* 20 to 62 inches to a fragipan

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; ashy silt loam

Bw—3 to 20 inches; ashy silt loam

2E—20 to 30 inches; loam

2B/E—30 to 51 inches; loam

2Bt—51 to 62 inches; clay loam

2Btx—62 to 66 inches; clay loam

**Dissimilar Minor Components**

**Grangemont soils, dry**

*Percentage of map unit:* 10 percent

*Landform:* Convex areas on hillslopes

**Kauder soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Benches and broad summits of ridges

**Threebear soils**

*Percentage of map unit:* 3 percent

*Landform:* Mountain slopes

**Norwidge soils**

*Percentage of map unit:* 2 percent

*Landform:* Concave draws of benches on mountain slopes

## **232—Tomodo-Lado complex, 15 to 35 percent slopes**

### **Map Unit Setting**

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,700 to 4,000 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Tomodo and similar soils:* 60 percent

*Lado and similar soils:* 15 percent

*Dissimilar minor components:* 25 percent

### **Characteristics of Tomodo**

#### **Setting**

*Landform:* Structural benches, mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (representative):* Southeast

*Aspect (range):* Northeast to southwest (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over loamy colluvium derived from metamorphic rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 20 to 62 inches to a fragipan

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A—2 to 3 inches; ashy silt loam

Bw—3 to 20 inches; ashy silt loam

2E—20 to 30 inches; loam

2B/E—30 to 51 inches; loam

2Bt—51 to 62 inches; clay loam

2Btx—62 to 66 inches; clay loam

### **Characteristics of Lado**

#### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

## Soil Survey of Clearwater Area, Idaho

*Aspect (representative):* Southeast

*Aspect (range):* Northeast to southwest (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or metamorphic rock

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 13.8 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 4 inches; medial silt loam

Bw—4 to 20 inches; medial silt loam

2Bt—20 to 48 inches; clay loam

3Bt—48 to 64 inches; loam

### ***Dissimilar Minor Components***

#### **Grandad soils, dry**

*Percentage of map unit:* 13 percent

*Landform:* Smooth mountain slopes

#### **Brodeer soils**

*Percentage of map unit:* 6 percent

*Landform:* Mountain slopes

#### **Floodwood soils, warm**

*Percentage of map unit:* 4 percent

*Landform:* Mountain slopes

#### **Threebear soils**

*Percentage of map unit:* 2 percent

*Landform:* Hills

## **233—Township-Rettig complex, 15 to 35 percent slopes**

### ***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,000 to 4,700 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

### **Map Unit Composition**

*Township and similar soils:* 55 percent

*Rettig and similar soils:* 25 percent

*Dissimilar minor components:* 20 percent

### **Characteristics of Township**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* West

*Aspect (range):* South to north (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

#### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw1—3 to 17 inches; ashy silt loam

2Bw2—17 to 35 inches; very flaggy loam

2Bw3—35 to 43 inches; very cobbly loam

2BC—43 to 53 inches; extremely cobbly sandy loam

2C—53 to 66 inches; extremely flaggy sandy loam

### **Characteristics of Rettig**

#### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Linear

*Aspect (representative):* West

*Aspect (range):* South to north (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained



*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Western redcedar/wild ginger (CN545)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam

2Bw2—27 to 34 inches; gravelly sandy loam

2Bw3—34 to 47 inches; gravelly sandy loam

2BC—47 to 63 inches; gravelly sandy loam

2C—63 to 66 inches; very gravelly sandy loam

***Dissimilar Minor Components***

**Poorman soils**

*Percentage of map unit:* 13 percent

*Landform:* Ridges

**Rettig soils, warm, dry**

*Percentage of map unit:* 7 percent

*Landform:* Concave mountain slopes

**234—Township-Rettig complex, 35 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 4,600 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Township and similar soils:* 65 percent

*Rettig and similar soils:* 25 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Township***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* North

*Aspect (range):* West to east (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 35 to 75 percent

## Soil Survey of Clearwater Area, Idaho

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/queencup beadlily (CN530)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw1—3 to 17 inches; ashy silt loam

2Bw2—17 to 35 inches; very flaggy loam

2Bw3—35 to 43 inches; very cobbly loam

2BC—43 to 53 inches; extremely cobbly sandy loam

2C—53 to 66 inches; extremely flaggy sandy loam

## ***Characteristics of Rettig***

### **Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* West to east (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Western redcedar/wild ginger (CN545)

### **Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam

2Bw2—27 to 34 inches; gravelly sandy loam

2Bw3—34 to 47 inches; gravelly sandy loam

2BC—47 to 63 inches; gravelly sandy loam

2C—63 to 66 inches; very gravelly sandy loam

***Dissimilar Minor Components***

**Poorman soils**

*Percentage of map unit:* 4 percent

*Landform:* Ridges

**Elkberry soils**

*Percentage of map unit:* 3 percent

*Landform:* Benches

**Rock outcrop**

*Percentage of map unit:* 3 percent

*Landform:* Convex areas of mountain slopes

***235—Township-Rettig-Nakarna complex, 35 to 65 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,600 to 4,600 feet

*Mean annual precipitation:* 35 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

***Map Unit Composition***

*Township, dry, and similar soils:* 45 percent

*Rettig, low precipitation, and similar soils:* 25 percent

*Nakarna, dry, and similar soils:* 20 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Township, Dry***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 14 to 23 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Grand fir/queencup beadlily (CN520)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; ashy silt loam

Bw1—3 to 17 inches; ashy silt loam

2Bw2—17 to 35 inches; very flaggy loam

2Bw3—35 to 43 inches; very cobbly loam

2BC—43 to 53 inches; extremely cobbly sandy loam

2C—53 to 66 inches; extremely flaggy sandy loam

***Characteristics of Rettig, Low Precipitation***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very high (about 12.7 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Grand fir/queencup beadlily (CN520)*

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material

A—1 to 7 inches; ashy loam

Bw1—7 to 27 inches; ashy loam

2Bw2—27 to 34 inches; gravelly sandy loam

2Bw3—34 to 47 inches; gravelly sandy loam

2BC—47 to 63 inches; gravelly sandy loam

2C—63 to 66 inches; very gravelly sandy loam

***Characteristics of Nakarna, Dry***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Linear

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* East to west (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over colluvium over residuum derived from mica schist

*Slope range:* 35 to 65 percent

*Depth to restrictive feature:* 40 to 60 inches to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/queencup beadlily (CN520)

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 5 inches; ashy silt loam

Bw1—5 to 15 inches; ashy silt loam

2Bw2—15 to 34 inches; gravelly loam

2C—34 to 42 inches; gravelly sandy loam

2Cr—42 to 52 inches; weathered bedrock

***Dissimilar Minor Components***

**Poorman soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Ridges

**Rettig soils, warm, dry**

*Percentage of map unit:* 5 percent

*Landform:* Concave mountain slopes

**236—Trappercreek-Narnett complex, 5 to 15 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 3,300 to 3,900 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

***Map Unit Composition***

*Trappercreek and similar soils:* 50 percent

*Narnett and similar soils:* 35 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Trappercreek***

**Setting**

*Landform:* Terraces

*Downslope shape:* Concave

## Soil Survey of Clearwater Area, Idaho

*Across-slope shape:* Linear  
*Aspect (representative):* East  
*Aspect (range):* North to south (clockwise)

### Properties and qualities

*Parent material:* Volcanic ash over mixed alluvium  
*Slope range:* 5 to 15 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 17.1 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Subalpine fir/queencup beadlily (CN620)

### Typical profile

Oi—0 to 4 inches; slightly decomposed plant material  
A—4 to 8 inches; medial silt loam  
Bw—8 to 19 inches; medial silt loam  
2Bt1—19 to 32 inches; silt loam  
2Bt2—32 to 46 inches; silt loam  
2Bt3—46 to 60 inches; silty clay loam  
2Bt4—60 to 79 inches; silty clay loam  
2Bt5—79 to 85 inches; silt loam

## Characteristics of Narnett

### Setting

*Landform:* Terraces  
*Downslope shape:* Linear  
*Across-slope shape:* Linear  
*Aspect (range):* All aspects

### Properties and qualities

*Parent material:* Volcanic ash over mixed silty alluvium  
*Slope range:* 5 to 15 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Very high (about 13.7 inches)

### Interpretive groups

*Land capability subclass (nonirrigated):* 6e  
*Plant community class:* Subalpine fir/queencup beadlily (CN620)

### Typical profile

A—0 to 9 inches; medial silt loam  
2Bw—9 to 15 inches; silt loam

2Bt—15 to 50 inches; silt loam  
3BC—50 to 58 inches; silt loam  
3C—58 to 80 inches; very gravelly silt loam

***Dissimilar Minor Components***

**Fico soils**

*Percentage of map unit:* 8 percent  
*Landform:* Mountain slopes

**Aquandic Cryaquepts**

*Percentage of map unit:* 7 percent  
*Landform:* Flood plains

**237—Uvi ashy loam, 35 to 75 percent slopes**

***Map Unit Setting***

*General landscape:* Mountains, canyonlands  
*Major land resource area (MLRA):* 43A—Northern Rocky Mountains  
*Elevation:* 1,600 to 4,000 feet  
*Mean annual precipitation:* 26 to 30 inches  
*Mean annual air temperature:* 40 to 45 degrees F  
*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Uvi and similar soils:* 65 percent  
*Dissimilar minor components:* 35 percent

***Characteristics of Uvi***

**Setting**

*Landform:* Canyons, mountain slopes  
*Downslope shape:* Convex  
*Across-slope shape:* Convex  
*Aspect (representative):* Northeast  
*Aspect (range):* Northwest to southeast (clockwise)

**Properties and qualities**

*Parent material:* Loess over colluvium derived from granite, basalt, and/or metamorphic rock  
*Slope range:* 35 to 75 percent  
*Depth to restrictive feature:* None within a depth of 60 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Flooding frequency:* None  
*Ponding frequency:* None  
*Seasonal high water table (minimum depth):* More than 72 inches  
*Salinity (maximum):* Not saline  
*Sodicity (maximum):* Not sodic  
*Available water capacity (entire profile):* Moderate (about 8.1 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e  
*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

Oe—0 to 1 inch; moderately decomposed plant material  
A—1 to 8 inches; ashy loam



Bt—8 to 44 inches; loam

C—44 to 61 inches; paragravelly sandy loam

***Dissimilar Minor Components***

**Kruse soils**

*Percentage of map unit:* 10 percent

*Landform:* Smooth mountain slopes

**Aldermant soils**

*Percentage of map unit:* 9 percent

*Landform:* Concave mountain slopes

**Noil soils**

*Percentage of map unit:* 8 percent

*Landform:* Mountain slopes

**Uvi soils, dry**

*Percentage of map unit:* 5 percent

*Landform:* Convex mountain slopes

**Cobbler soils**

*Percentage of map unit:* 2 percent

*Landform:* Convex mountain slopes

**Rock outcrop**

*Percentage of map unit:* 1 percent

*Landform:* Convex areas of mountain slopes

***238—Uvi ashy silt loam, 35 to 75 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,400 to 3,400 feet

*Mean annual precipitation:* 26 to 28 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

***Map Unit Composition***

*Uvi and similar soils:* 90 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Uvi soils***

**Setting**

*Landform:* Canyons

*Downslope shape:* Concave

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* West to northeast (clockwise)

**Properties and qualities**

*Parent material:* Loess over colluvium derived from granite, basalt, and/or metamorphic rock

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* None within a depth of 60 inches

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.9 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Grand fir/ninebark (CN506)

**Typical profile**

A—0 to 4 inches; ashy silt loam

Bt—4 to 55 inches; loam

2C—55 to 65 inches; very gravelly loam

***Dissimilar Minor Components***

**Carlinton soils**

*Percentage of map unit:* 5 percent

*Landform:* Benches in canyons

**Johnson soils**

*Percentage of map unit:* 5 percent

*Landform:* Side slopes of canyons

***239—Vaywood, high precipitation-Vaywood, dry complex, 15 to 35 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,500 to 5,400 feet

*Mean annual precipitation:* 50 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

***Map Unit Composition***

*Vaywood, high precipitation, and similar soils:* 60 percent

*Vaywood, dry, and similar soils:* 30 percent

*Dissimilar minor components:* 10 percent

***Characteristics of Vaywood, High Precipitation***

**Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 24 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

## Soil Survey of Clearwater Area, Idaho

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Mountain hemlock/queencup beadlily (CN685)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; medial silt loam

Bw1—7 to 15 inches; medial silt loam

Bw2—15 to 20 inches; medial silt loam

2Bw3—20 to 25 inches; very cobbly loam

2Bw4—25 to 38 inches; very cobbly sandy loam

2BC—38 to 47 inches; gravelly sandy loam

2C—47 to 62 inches; gravelly sandy loam

## ***Characteristics of Vaywood, Dry***

### **Setting**

*Landform:* Ridges, mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* Northwest

*Aspect (range):* Southwest to northeast (clockwise)

### **Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 14 to 24 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Mountain hemlock/menziesia (CN680)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; medial silt loam

Bw1—7 to 15 inches; medial silt loam

Bw2—15 to 20 inches; medial silt loam  
2Bw3—20 to 25 inches; very cobbly loam  
2Bw4—25 to 38 inches; very cobbly sandy loam  
2BC—38 to 47 inches; gravelly sandy loam  
2C—47 to 62 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Hucberit soils**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Vaywood soils**

*Percentage of map unit:* 3 percent

*Landform:* Convex mountain slopes

**Hucberit soils, wet**

*Percentage of map unit:* 2 percent

*Landform:* Smooth mountain slopes

***240—Vaywood medial silt loam, 35 to 75 percent slopes***

***Map Unit Setting***

*General landscape:* Mountains

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 4,400 to 5,500 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

***Map Unit Composition***

*Vaywood and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

***Characteristics of Vaywood***

**Setting**

*Landform:* Mountain slopes

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* North

*Aspect (range):* West to east (clockwise)

**Properties and qualities**

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 35 to 75 percent

*Depth to restrictive feature:* 14 to 24 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated): 7e*

*Plant community class: Subalpine fir/queencup beadlily (CN620)*

**Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; medial silt loam

Bw1—7 to 15 inches; medial silt loam

Bw2—15 to 20 inches; medial silt loam

2Bw3—20 to 25 inches; very cobbly loam

2Bw4—25 to 38 inches; very cobbly sandy loam

2BC—38 to 47 inches; gravelly sandy loam

2C—47 to 62 inches; gravelly sandy loam

***Dissimilar Minor Components***

**Handoff soils**

*Percentage of map unit: 10 percent*

*Landform: Drainageways*

**Rock outcrop**

*Percentage of map unit: 5 percent*

*Landform: Convex areas of mountain slopes*

**241—Vaywood-Handoff complex, 15 to 35 percent slopes**

***Map Unit Setting***

*General landscape: Mountains*

*Major land resource area (MLRA): 43A—Northern Rocky Mountains*

*Elevation: 4,500 to 5,400 feet*

*Mean annual precipitation: 40 to 55 inches*

*Mean annual air temperature: 38 to 41 degrees F*

*Frost-free period: 30 to 100 days*

***Map Unit Composition***

*Vaywood and similar soils: 65 percent*

*Handoff and similar soils: 20 percent*

*Dissimilar minor components: 15 percent*

***Characteristics of Vaywood***

**Setting**

*Landform: Ridges, mountain slopes*

*Downslope shape: Convex*

*Across-slope shape: Convex*

*Aspect (representative): North*

*Aspect (range): West to east (clockwise)*

**Properties and qualities**

*Parent material: Volcanic ash over mixed colluvium*

*Slope range: 15 to 35 percent*

*Depth to restrictive feature: 14 to 24 inches to strongly contrasting textural stratification*

*Drainage class: Well drained*

*Capacity of the most limiting soil layer to transmit water (Ksat): Moderately high*

*Flooding frequency: None*

## Soil Survey of Clearwater Area, Idaho

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 7.5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Subalpine fir/queencup beadlily (CN620)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

Oe—1 to 2 inches; moderately decomposed plant material

A—2 to 7 inches; medial silt loam

Bw1—7 to 15 inches; medial silt loam

Bw2—15 to 20 inches; medial silt loam

2Bw3—20 to 25 inches; very cobbly loam

2Bw4—25 to 38 inches; very cobbly sandy loam

2BC—38 to 47 inches; gravelly sandy loam

2C—47 to 62 inches; gravelly sandy loam

### **Characteristics of Handoff**

#### **Setting**

*Landform:* Mountain slopes, drainageways

*Downslope shape:* Linear

*Across-slope shape:* Concave

*Aspect (representative):* North

*Aspect (range):* West to east (clockwise)

#### **Properties and qualities**

*Parent material:* Volcanic ash over colluvium derived from metamorphic rock and/or granite

*Slope range:* 15 to 35 percent

*Depth to restrictive feature:* 17 to 30 inches to strongly contrasting textural stratification

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Moderate (about 8.9 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 6e

*Plant community class:* Sitka alder/miner's lettuce (CN001)

### **Typical profile**

Oi—0 to 2 inches; slightly decomposed plant material

A1—2 to 11 inches; medial loam

A2—11 to 22 inches; medial loam

Bw1—22 to 30 inches; gravelly medial loam

2Bw2—30 to 45 inches; very gravelly loam

2BC—45 to 54 inches; extremely gravelly sandy loam

2C—54 to 64 inches; extremely cobbly loamy coarse sand

***Dissimilar Minor Components***

**Bouldercreek soils, moist**

*Percentage of map unit:* 5 percent

*Landform:* Mountain slopes

**Garveson soils**

*Percentage of map unit:* 5 percent

*Landform:* Sharp, convex mountain slopes

**Rock outcrop**

*Percentage of map unit:* 5 percent

*Landform:* Convex areas of mountain slopes

**242—Water**

*Description of areas:* Open areas of fresh water more than 6 acres in size

**243—Wellsbench silt loam, 2 to 10 percent slopes**

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,000 to 2,300 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Wellsbench and similar soils:* 80 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Wellsbench***

**Setting**

*Landform:* Structural benches

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 2 to 10 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

**Interpretive groups**

*Land capability subclass (nonirrigated):* 3e

*Ecological site:* LOAMY 16-22 FEID-PSSPS (R009XY003ID)



**Typical profile**

A—0 to 6 inches; silt loam

Bt1—6 to 14 inches; gravelly silty clay loam

Bt2—14 to 41 inches; very cobbly silty clay loam

R—41 to 51 inches; unweathered bedrock

***Dissimilar Minor Components***

**Jacket soils**

*Percentage of map unit:* 10 percent

*Landform:* Benches in canyons

**Gwin soils**

*Percentage of map unit:* 5 percent

*Landform:* Slopes of escarpments in canyons

**Kettenbach soils**

*Percentage of map unit:* 5 percent

*Landform:* Gently sloping side slopes of benches in canyons

***244—Wellsbench-Lacy complex, 25 to 55 percent slopes***

***Map Unit Setting***

*General landscape:* Canyonlands

*Major land resource area (MLRA):* 43A—Northern Rocky Mountains

*Elevation:* 1,800 to 3,000 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

***Map Unit Composition***

*Wellsbench and similar soils:* 50 percent

*Lacy and similar soils:* 30 percent

*Dissimilar minor components:* 20 percent

***Characteristics of Wellsbench***

**Setting**

*Landform:* Structural benches

*Downslope shape:* Convex

*Across-slope shape:* Linear

*Aspect (representative):* South

*Aspect (range):* Southeast to southwest (clockwise)

**Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 35 to 55 percent

*Depth to restrictive feature:* 40 to 60 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

## Soil Survey of Clearwater Area, Idaho

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Low (about 5 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Ecological site:* LOAMY 16-22 FEID-PSSPS (R009XY003ID)

### **Typical profile**

A—0 to 6 inches; silt loam

Bt1—6 to 14 inches; gravelly silty clay loam

Bt2—14 to 41 inches; very cobbly silty clay loam

R—41 to 51 inches; unweathered bedrock

## ***Characteristics of Lacy***

### **Setting**

*Landform:* Structural benches

*Downslope shape:* Convex

*Across-slope shape:* Convex

*Aspect (representative):* South

*Aspect (range):* Southeast to southwest (clockwise)

### **Properties and qualities**

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 25 to 55 percent

*Depth to restrictive feature:* 10 to 20 inches to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Flooding frequency:* None

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* More than 72 inches

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* Very low (about 2 inches)

### **Interpretive groups**

*Land capability subclass (nonirrigated):* 7e

*Plant community class:* Ponderosa pine/Idaho fescue (CN140)

### **Typical profile**

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 3 inches; loam

Bt1—3 to 13 inches; very cobbly clay loam

Bt2—13 to 16 inches; extremely cobbly clay loam

R—16 to 26 inches; unweathered bedrock

## ***Dissimilar Minor Components***

### **Jacket soils**

*Percentage of map unit:* 10 percent

*Landform:* Canyons

### **Keuterville soils**

*Percentage of map unit:* 8 percent

*Landform:* Draws in canyons

### **Rock outcrop**

*Percentage of map unit:* 2 percent

*Landform:* Convex areas on side slopes of canyons

## **245—Wilkins silt loam, 0 to 5 percent slopes**

### **Map Unit Setting**

*General landscape:* Plateaus

*Major land resource area (MLRA):* 9—Palouse and Nez Perce Prairies

*Elevation:* 2,400 to 3,200 feet

*Mean annual precipitation:* 23 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

### **Map Unit Composition**

*Wilkins and similar soils:* 85 percent

*Dissimilar minor components:* 15 percent

### **Characteristics of Wilkins**

#### **Setting**

*Landform:* Swales

*Downslope shape:* Linear

*Across-slope shape:* Linear

*Aspect (range):* All aspects

#### **Properties and qualities**

*Parent material:* Mixed alluvium and/or loess

*Slope range:* 0 to 5 percent

*Depth to restrictive feature:* 15 to 30 inches to an abrupt textural change

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Flooding frequency:* Occasional (see Water Features table)

*Ponding frequency:* None

*Seasonal high water table (minimum depth):* At the soil surface to a depth of 13 inches (see Water Features table)

*Salinity (maximum):* Not saline

*Sodicity (maximum):* Not sodic

*Available water capacity (entire profile):* High (about 11.1 inches)

#### **Interpretive groups**

*Land capability subclass (nonirrigated):* 3w

*Ecological site:* DRY MEADOW (R009XY019ID)

#### **Typical profile**

A—0 to 15 inches; silt loam

E—15 to 20 inches; silt loam

2Bt—20 to 52 inches; silty clay

3BC—52 to 64 inches; clay loam

### **Dissimilar Minor Components**

#### **Setters soils**

*Percentage of map unit:* 10 percent

*Landform:* Convex benches

#### **Taney soils**

*Percentage of map unit:* 3 percent

*Landform:* Plateaus, concave benches

#### **Latahco soils**

*Percentage of map unit:* 2 percent

*Landform:* Flood plains, drainageways

# Use and Management of the Soils

---

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

## Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

## Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited*, *somewhat limited*, and *very limited*. The suitability ratings are expressed as *well suited*, *moderately suited*, *poorly suited*, and *unsuited* or as *good*, *fair*, and *poor*.

## Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

## Crops and Pasture

Prepared by Bruce Hanson, district conservationist, Natural Resources Conservation Service.

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described. Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

### Crops

The soils and slopes of the cropland in the survey area are highly variable. Elevation of the annually cropped fields ranges from 2,000 feet on the canyon benches near Ahsahka to more than 3,300 feet near Weippe. Precipitation ranges from about 24 inches at the lower elevations to about 35 inches at the higher elevations. The lower elevations have the highest temperatures and longest growing season, and the higher elevations have the coldest temperatures and shortest growing season. Typical soils are the Taney, Setters, Carlinton, Southwick, and Cavendish series ([fig. 5](#)). These soils supported forests that have been cleared for agriculture. The amount of annual precipitation increases generally from west to east across the areas of cropland. This is indicative of the transition from the ponderosa pine to Douglas-fir to grand fir habitat types that these soils supported before they were converted to cropland. As the precipitation and the subsequent leaching of the soil



Figure 5.—Area of Taney ashy silt loam, 3 to 10 percent slopes.



increase, the rate of nutrient exchange and availability of nutrients for annual crops decrease.

Table 5 shows the soils that are associated with each forest habitat type. The soils are acidic and are normally deficient in nitrogen and sulfur. They are moderately deep to a fragipan or clay layers. Both the fragipan and clay layers restrict rooting depth and result in a seasonal perched water table in spring, which affects the timing of cultivation and seeding. Because of the seasonal perched water table, the soils are susceptible to compaction if tilled early in spring. As a result of the topography, soil erosion is the main limitation. Erosion is a concern on all of the soils in the survey area; however, those that have steeper slopes and higher precipitation are subject to the greatest risk of erosion. The most critical erosion period is late in winter during periods of snowmelt and rainfall on saturated or frozen soil. Loss of topsoil through erosion is a very serious concern on the majority of the cropland in the survey area because water quality is impaired and productivity is reduced as the surface layer is lost. Since these soils are not as deep as the prairie soils immediately to the west, loss of soil surface material is significant because there is less underlying soil material. Frost heaving is significant in many of the soils, affecting crops that grow in winter. Fields commonly are protected by snow cover for at least 60 days per year, but frost damage can occur early or late in winter. If the protective snow cover lasts too long, crops can be damaged by mold, fungi, and disease.

About 24,000 acres of nonirrigated cropland is in the survey area. This acreage receives a high amount of precipitation and therefore is suitable for annual cropping. The main crop is soft white winter wheat, which is grown in rotation with spring peas, lentils, barley, oats, spring wheat, canola, winter rapeseed, garbanzo beans, Austrian winter peas, and a few other annually tilled crops (fig. 6). Some rotations also include long-term stands of grass seed or hay. Pasture and hay crops include alfalfa, clover,



Figure 6.—Winter rapeseed and soft white winter wheat in an area of Taney ashly silt loam, 3 to 10 percent slopes, near Cavendish.

and grass. The relative amount of pastureland and hayland increases as elevation and precipitation increase.

Extensive management is needed to minimize soil erosion. Use of practices such as longer crop rotations, residue management systems, no-till farming, direct seeding, mulch tilling, divided-slope farming, seeding across the slope, growing grasses and legumes in rotation with annual crops, and constructing grassed waterways and stream buffers are needed to control erosion. Other practices are needed to increase the content of organic matter in the soil and to improve soil quality. Structural practices, such as construction of water- and sediment-control basins, can also be used in some areas to reduce the rate of runoff and to minimize gully erosion. A balanced nutrient management program that is based on soil tests is needed for the production of all crops. Winter wheat is the most commonly fertilized crop. Carryover nitrogen levels generally are insufficient to produce an adequate crop. As precipitation increases in winter, the risk of leaching of nitrogen applied in fall increases. Applying nitrogen fertilizer in fall and again in spring helps to reduce the risk of leaching. Smaller amounts of sulfur, potassium, and phosphorous are also needed. Lime can be applied to increase the reaction (pH) of the soil and thus increase the production of field crops, especially forage legumes and pulse crops.

The Weippe and Grangemont areas generally have a colder, wetter climate than other areas of the survey area used for crops. Typical soils in these areas are those of the Teneb, Lewhand, and Gramil series. The cold soil temperature restricts the kinds of crops that can be grown. Oats, grass hay, and pasture are the most commonly grown crops. The cold temperatures in winter restrict the growth of most crops in fall. The soils have a moderate or high content of organic matter and commonly have an argillic horizon or fragipan that restricts internal drainage. The resulting seasonal perched water table affects the timing of cultivation and seeding.

## Pastureland and Hayland

About 14,000 acres of the survey area are tilled for the production of nonirrigated hay and pasture (fig. 7). Hay is also grown in rotation in areas of cropland, but the soils used primarily for forage crops are in areas of bottomland and on flood plains that are generally too wet and cool to be used for crop production or in areas on uplands that have been cleared of timber and seeded to grasses and legumes.

Suitable grasses grown for pasture and hay include orchardgrass, meadow brome, smooth brome, timothy, intermediate wheatgrass, perennial ryegrass, and tall fescue. Alfalfa hay is suited to the drier soils on uplands. Legumes grown include red clover, alsike clover, and white clover. Individual fields of pasture and hay typically are less than 40 acres in size and commonly are used for livestock operations. Hay is harvested early in summer, and then livestock graze the fields when regrowth occurs in fall.

The main limitations for the production of hay and pasture include occasional or frequent periods of flooding, soil wetness, and rainfall during the harvesting of hay.

Harvest management practices are needed to maintain the high production of forage. Practices include additions of appropriate fertilizers and soil amendments, harvesting at the proper growth stage, and maintaining adequate stubble to protect the plants in winter. Use of high-yielding plants that are adapted to the individual soils is essential for maximum production. Fertilizer and herbicides are needed for high yields. A fertilization program should include proper application of nitrogen, phosphorous, and sulfur based on soil tests. Livestock grazing should be controlled to prevent compaction of the soil and trampling of plants when the soil is wet. Overgrazing of fields adjacent to streams can result in damage to riparian vegetation and can reduce the stability of the streambanks and the quality of water downstream. Prescribed grazing is needed to maintain the production of desirable forage plants. Grazing should be deferred in spring until the plants reach a height of 8 inches. Including the





Figure 7.—Pasture in an area of Cavendish-Taney complex, 8 to 20 percent slopes.

rotation of pastures in the planned grazing system allows for regrowth of plants during rest periods. For most pasture species, leaving the stubble at a height of about 4 inches at the end of the grazing period allows for rapid recovery. Grazing management practices that facilitate controlled grazing systems include construction of fences and livestock water developments.

### Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in [table 6](#). In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall and other climatic factors.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include effective crop rotations, moderate drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate tillage depth, speed, timing, and frequency; appropriate equipment weight and traction to minimize slippage and soil compaction; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is

developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the yields tables are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

## Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops (USDA, 1961). Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961). Only class and subclass are used in this survey.

*Capability classes*, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

*Capability subclasses* are soil groups within one class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, 2*e*. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

The capability classification of the soils in this survey area is given in the section “Detailed Soil Map Units” and in [table 7](#).

## Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in [table 8](#). This list does not constitute a recommendation for a particular land use. For some soils identified in the table, measures that overcome a hazard or limitation, such as flooding, wetness, and erosion, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading “Detailed Soil Map Units.”

## Grazing Land

In addition to the 14,000 acres of pastureland and hayland, the survey area has about 4,500 acres of mountain meadow and 10,500 acres of rangeland and open forestland that are native grazing lands. In addition, there are about 780,000 acres of forested allotments leased for grazing, in areas where management activities have opened up the forest understory vegetation. This acreage is generally referred to as transitional range or secondary range.

The primary livestock enterprise in the survey area consists of cow-calf beef cattle operations. Smaller acreages of grazing land are used for horses, mules, sheep, and goats. As spring growth begins, the livestock are allowed onto the rangeland and then are moved to the higher elevations as the season and forage conditions allow. Normally, livestock are allowed onto the rangeland in mid-April. Most livestock graze in the forested areas in summer and early in fall. In the early part of October to mid-October, the livestock are rounded up, calves are weaned, and the brood cow herd

is moved to the home range and to wintering areas in the low-lying valleys. Typically, livestock are kept in feeding areas for about 5 months in winter. Feed for this period is either produced locally or imported into the area. Calving generally occurs in January through April.

The rangeland and grazeable forestland in the survey area provide valuable habitat for several species of wildlife. In particular, the riparian areas adjacent to perennial streams and intermittent draws produce diverse native shrubs and forage plants that provide critical habitat for wildlife.

Grazeable forestland is intermixed with rangeland at the higher elevations in canyons (general soil map unit 7). In these areas, forestland is dominant on the northerly aspects and rangeland is dominant on the more southerly exposures. Open forests on the plateaus adjacent to the river canyons (general soil map unit 6) generally have a good stand of native vegetation, and they produce abundant forage for livestock and wildlife. The condition of the vegetation in these areas typically is better than that in other areas of grazing land in the survey area. These areas are traditionally more resistant to severe weed invasion because of the shade and competition from woody plants. These areas also are grazed later in the season, which encourages growth of the native perennial grasses. Grazeable forestland is also on the upper plateaus adjacent to the canyons (general soil map unit 8). These forested areas vary from open stands of ponderosa pine and Douglas-fir, which have excellent natural potential for forage production, to dense stands of grand fir, which produce forage for only a short time following the opening of the canopy by timber harvesting or fire.

## Rangeland

The rangeland in the survey area is primarily along the south-facing canyon walls adjacent to the Clearwater River and its tributaries (general soil map unit 3). Some rangeland is also in gently sloping areas along the canyon rims. The dominant historic climax plant community (HCPC) of the rangeland consists of bluebunch wheatgrass and Sandberg bluegrass at the lower elevations and bluebunch wheatgrass and Idaho fescue at the higher elevations. These rangeland plant communities are 60 to 70 percent grasses, 20 to 25 percent forbs, and 5 to 15 percent shrubs.

Rangeland in the survey area has undergone intense pressure from livestock grazing since the late 1800's, and the plant communities have been altered substantially. The invasion of weeds into the areas of rangeland in canyons has drastically reduced the production of forage. In the early 1900's, annual cheatgrass invaded the areas of rangeland following severe grazing use, replacing the perennial native grasses. Later in the 1900's, medusahead wildrye, goatweed, yellow starthistle, and another annual grass, ventenata, began replacing cheatgrass as the dominant plants. The native grasses commonly do not regenerate naturally because the seedlings cannot compete with the weedy annual species.

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

Table 5 shows, for each soil that supports rangeland vegetation suitable for grazing, the rangeland ecological site, the potential annual production of vegetation in favorable, normal, and unfavorable years, the characteristic vegetation, and the percent composition of each species. An explanation of the column headings in the table follows.

A *rangeland ecological site* produces a characteristic historic climax plant community (HCPC). The HCPC of one site differs from that of other sites in kind, amount, and proportion of range plants. The relationship between soils and vegetation



was ascertained during this survey; thus, rangeland ecological sites generally can be determined directly from the soil maps. Soil properties that affect moisture supply and plant nutrients have the greatest influence on the productivity of range plants. Soil reaction and a seasonal high water table are also important. Each ecological site is identified by a name that includes soil or topographic characteristics, the precipitation zone, and the key indicator species in the plant community. For some rangeland ecological sites, no single species is dominant in the forbs layer. For these sites, "forbs" is listed instead of a particular species. Names of the plant species are abbreviated. The abbreviations are defined in the National List of Scientific Plant Names (USDA, 1982).

*Total dry-weight production* is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the HCPC. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Dry weight is the total annual yield per acre of air-dry vegetation. Yields are adjusted to a common percent of air-dry moisture content. The relationship of green weight to air-dry weight varies according to factors such as exposure, amount of shade, recent rains, and unseasonable dry periods.

*Characteristic vegetation* (the grasses, forbs, and shrubs that make up most of the HCPC on each soil) is listed by common name. Under *composition*, the expected percentage of the total annual production is given under the heading "range" for each species making up the characteristic vegetation of the HCPC. The amount that can be used as forage depends on the kinds of grazing animals, the grazing season, and the palatability of the plants.

Range management requires a knowledge of the kinds of soil and of the HCPC. It also requires an evaluation of the present plant community as compared to the desired plant community on a particular rangeland ecological site. The more closely the existing community resembles the desired plant community, the higher the range similarity index. This index can be used as a tool, but it is not an ecological rating.

The primary objective in range management is to control grazing so that the kinds of plants growing on a site are sustained along with the desired production, nutrient cycling, energy cycling, and hydrologic function of the site. Such management generally results in the optimum production of vegetation to meet grazing needs, provide wildlife habitat, control undesirable weeds, and protect soil and water resources.

The characteristics of the soils and the slope severely limit use of mechanized equipment for rangeland improvement practices, such as range seeding, cross fencing, installing livestock water developments, using prescribed fires, and controlling weeds and brush. As a result, rangeland improvements commonly are limited to management practices that control the timing, duration, frequency, and intensity of plant use along with control of the kind, class, and number of grazing animals.

The primary management practice needed on rangeland in this survey area is prescribed grazing. Prescribed grazing allows for plants to achieve sufficient growth in spring to withstand grazing pressure, allows for periodic rest or deferment of grazing, and allows for removal of livestock when the optimum amount of forage has been grazed. If rotation grazing systems are used, two or more grazing units are alternately rested and grazed in a planned sequence for a period of years. Rest periods for

recovery of key plants are established during the growing season. Prescribed grazing allows for grazing at an intensity that maintains or improves the quantity and quality of desirable vegetation and maintains enough plant cover to protect the soil. The appropriate intensity of use is determined by monitoring the key forage species.

## Forest Understory Vegetation

Forest understory vegetation consists of the grasses, forbs, and shrubs that grow beneath the forest canopy. Some forests, if well managed, can produce enough understory vegetation to support grazing of livestock and wildlife without damage to the timber resources. The composition of the understory vegetation and the site potential of a forested area are determined by the type of soil, available moisture, height and spacing of trees, density of the forest canopy, depth and condition of the forest litter, and number of years since the occurrence of fire, logging, or other disturbances.

The amount of forage produced in a forest depends mainly on the amount of light that reaches the forest floor. Many forage plants require large amounts of sunlight. When the forest canopy is opened by timber harvesting or fire, there generally is an increase in the production of understory plants for a number of years. As the forest canopy closes over time, understory production decreases, regardless of the degree of grazing. This range is referred to as transitional. In many forests, the density of the tree canopy that provides maximum wood production allows for production of only sparse understory vegetation.

Several dominant tree species in the survey area are indicators of the historic climax plant community (HCPC), including ponderosa pine, lodgepole pine, Douglas-fir, grand fir, subalpine fir, mountain hemlock, and western redcedar. Other important overstory tree species include western white pine, western larch, and Engelmann spruce. These species have been classified into distinct forest ecological sites that are closely related to the traditional habitat types. A habitat type is a collective term for an environment that has the potential to support similar plant associations prior to disturbances such as fire, flooding, grazing, logging, or epidemics.

The habitat types represented in this survey area in areas where grazing is a secondary use are ponderosa pine/Idaho fescue, ponderosa pine/common snowberry, Douglas-fir/common snowberry, Douglas-fir/mallow ninebark, grand fir/longtube twinflower, grand fir/mallow ninebark, and grand fir/queencup beadlily. These habitat types have been correlated to those identified in "Forest Habitat Types of Northern Idaho: A Second Approximation" (Cooper and others, 1991).

The ponderosa pine habitat types represent the driest forest habitat types in the survey area, and they commonly have an open parkland appearance (fig. 8). These habitat types generally produce abundant forage that includes Idaho fescue, bluebunch wheatgrass, and numerous forbs. The ponderosa pine/common snowberry habitat type consists dominantly of low shrubs, including common snowberry, Saskatoon serviceberry, low Oregongrape, and Woods' rose.

Many soils support Douglas-fir habitat types that have a moderately dense to dense tree canopy. The understory of these habitat types is dominantly low to medium shrubs such as mallow ninebark, creambush oceanspray, common snowberry, and white spirea. Forage commonly is sparse in these areas because the understory consists of less than 25 percent herbaceous plants such as pine reedgrass, Columbia brome, elk sedge, and associated forbs.

The grand fir habitat types are on the more moist soils in the survey area (fig. 9). These habitat types typically do not produce grazeable vegetation unless the tree canopy is opened by disturbance. The understory vegetation is comprised mostly of low herbaceous plants such as longtube twinflower, goldthread, and spreading



**Figure 8.—Ponderosa pine-Idaho fescue habitat type in an area of Fordcreek loam, 5 to 15 percent slopes.**

sweetroot. The dominant shrubs are big huckleberry, common snowberry, and baldhip rose.

The subalpine fir and mountain larch habitat types are on the coldest soils in the survey area ([fig. 10](#)). They are on the highest mountain ridges and summits or in areas of drainageways where cold air accumulates, forming frost pockets. These habitat types typically do not produce grazeable vegetation. Even if the tree canopy is opened by disturbance, they tend to produce large quantities of woody species that are poorly suited to grazing. The understory vegetation is comprised mostly of shrubs such as big blueberry, rustyleaf menziesia, and myrtle pachistima and forbs such as common beargrass, queencup beadlily, western rattlesnake plantain, and broadleaf arnica.

[Table 5](#) shows, for each soil suitable for use as grazeable understory, the plant association, the potential annual production of vegetation, the characteristic vegetation, and the percent composition of each species. The total production of understory vegetation includes the herbaceous plants and the leaves, twigs, and fruit of woody plants up to a height of 4.5 feet. It is expressed in pounds per acre of air-dry vegetation in favorable, normal, and unfavorable years. In a favorable year, the soil moisture is above average during the optimum time during the growing season; in a normal year, the soil moisture is average; and in an unfavorable year, the soil moisture is below average.

The table also lists the common names of the characteristic vegetation on each soil, and under the heading "Forest," the composition, by percentage of air-dry weight, of each plant species. The table shows the kind and percentage of understory plants





**Figure 9.—Grand fir/clintonia habitat type in an area of Reggear-Kauder complex, 5 to 20 percent slopes.**

expected under a canopy density that is most nearly typical of forest stands that have high timber production.

Grazing management objectives on forestland should include use of understory at an intensity that will maintain the quality of forage without damaging the timber resources. Maintaining grazeable forests requires knowledge of both forestry and grazing management. Forest conservation practices, such as thinning, open the forest canopy and can increase the production of both timber and forage.

In areas of grazeable forests, livestock commonly concentrate in areas that are easily accessible and have an open canopy with abundant forage. This includes meadows, riparian areas along streams, logged areas, tree plantations, and roads, skid trails, and landings that have been seeded. Practices that manage the distribution of livestock and allow for proper timing, duration, frequency, and intensity of vegetation use are needed to maintain the understory forage resource.

The season of use and the length of grazing periods should be based on the condition of the key forage species. Practices such as fencing, constructing water developments, seeding, strategically placing salt and dietary supplements, using prescribed fires, and herding can be used to promote the proper distribution of livestock.



Figure 10.—Subalpine fir habitat type in an area of Fico-Weitas complex, 20 to 40 percent slopes.

## Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 9, 10, and 11 show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage

ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Application of manure and food-processing waste* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include saturated hydraulic conductivity (Ksat), depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

*Application of sewage sludge* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.



The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include saturated hydraulic conductivity (Ksat), depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

*Disposal of wastewater by irrigation* not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, saturated hydraulic conductivity (Ksat), slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

*Overland flow of wastewater* is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

*Rapid infiltration of wastewater* is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Saturated hydraulic conductivity (Ksat)

and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

*Slow rate treatment of wastewater* is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, saturated hydraulic conductivity (Ksat), depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

## Forestland Productivity and Management

Prepared by Frank Gariglio, forester, Natural Resources Conservation Service.

Long before the arrival of the Lewis and Clark Expedition, the forests of Clearwater County were largely a result of natural forces and time. Native tribes used forests and associated forest products for food, transportation, and shelter. Periodic wildfires in the forests were the primary agent of change. Lightning strikes started natural fires, and in the drier areas, fires commonly were intentionally ignited by native people for a variety of purposes. These historic fires commonly were more frequent but less intense than fires of the present.

Although the western United States and what was to become northern Idaho was explored in the early 1800's, a number of years passed before the area began to change as a result of the westward expansion. The first sawmill in Clearwater County was built at Pierce in 1862 to supply lumber for the early gold mining settlements. The modern and more sustained settlement of Clearwater County and adjacent counties began after the opening of the Nez Perce Reservation to white men in 1885. Local forest products at that time commonly were used for lumber, fuel, fencing materials, and shingles. Small-scale local mills were built to supply the needs of the early settlers.

As the timber supply in the Great Lakes region of the United States began to decline by the late 1890's, timber baron Frederick Weyerhaeuser became interested in the forest resources of Washington, Oregon, and northern Idaho. Weyerhaeuser, his rival George Scofield, and other pioneers were some of the first to purchase large tracts of forestland in Clearwater County for private ownership. The high commercial value of the forests of this area, especially the western white pine forests, was apparent to people experienced in the timber industry ([fig. 11](#)).

The decline of virgin stands in the eastern part of the United States, a favorable national economy, the developing railroad system, and the need for housing materials along the west coast of the United States all contributed to the large-scale forestland acquisition by early-day timber speculators. In many cases, the means to purchase this timberland came by way of railroad companies that had claims on large tracts of undeveloped land in the west. The holdings originated with the construction of the rail lines some 30 years earlier and were passed on to timber companies through Federal "scripts."



**Figure 11.—An old-growth stand of white pine and western redcedar, which was common throughout Clearwater County. Photograph courtesy of Potlatch Corporation.**

The rush for land in the forests of Clearwater County reached a peak in the summer of 1900, as most of the county was partitioned to either private or industry ownership and the rest was designated as Federal land. By 1905, the rich timberland in the flatter and more accessible areas of Clearwater County and Latah County to the west were being developed for railroad transportation systems. This began the large-scale logging and manufacturing era of the region. The first large-scale lumber manufacturing mill in the region was at Potlatch in eastern Latah County.

In the spring of 1911, the Potlatch Timber Company began construction of a sawmill at Elk River. This was to become the world's most advanced sawmill, using electricity rather than steam power to process finished logs. The heavy snowfall and relative isolation of Elk River hampered operations in winter. The mill closed in 1931.

In 1927, the Clearwater Timber Company completed construction of a mill at Lewiston. Much of the valuable timber in the land adjacent to the North Fork of the Clearwater River eventually was sent to this mill. The high riverflows in spring allowed for logs to be floated to this mill. These log drives came to an end in 1969 with the construction of Dworshak Reservoir near Orofino. Horses were used in logging operations in the early days, and then trucks and other machinery were used in the early 1940's. Log chutes and flumes were also used to move timber from the forests to the Clearwater River and then to the mill.

Logging camps were common in the more isolated areas of Clearwater County. Many of these camps were transitory and were moved as the supply of timber was exhausted. The town of Headquarters began as a forest camp, but it became the center of forest management operations for the Potlatch Corporation in Clearwater County.

Short-distance railroads were built in the 1920's to move logs from the central part of the county to centralized mills. Mills were constructed at Orofino, Jaype, Weippe,

and other population centers. Besides the early Potlatch Corporation operations, Clearwater Timber Company, White Pine Lumber Company, and other smaller companies were active in the forest products industry. Timber harvesting and, to a lesser degree, the manufacturing of finished forest products have been the major economic industries in Clearwater County for nearly a century. The county is one of the most productive timber counties in Idaho, with Federal, State, industrial, and nonindustrial private forestland all important to the growth and production of wood resources.

The most extensive conifer tree species in the county are grand fir, Douglas-fir, western white pine, ponderosa pine, lodgepole pine, western hemlock, western redcedar, western larch, subalpine fir, and Engelmann spruce. Forest tree species of lesser extent include subalpine larch and mountain hemlock. Cottonwood, quaking aspen, and birch are in areas of wetter soils and along riparian zones.

A favorable combination of climate and soils, especially the thick upper layer of volcanic ash common in most of the soils in the county, contribute to forest productivity. Other characteristics that affect growth of forests are the depth, parent material, chemistry, and texture of the soils and other environmental and physical factors. The following table identifies general soil and climatic characteristics and their affect on common trees in the county (Fiedler and Lloyd, 1995).

Relative Silvical Characteristics of the Common Forest Trees

	Low			Moderate			High			
Shade tolerance	WL	LP	PP	WP	DF	ES	GF	AF	WC	WH
Frost tolerance	WH	WC	GF	PP	WL	DF	WP	AF	ES	LP
Drought tolerance	WH	WC	AF	ES	WP	GF	WL	LP	DF	PP
Fire resistance	WH	WC	AF	ES	WP	GF	WL	LP	DF	PP
Excess water tolerance	PP	DF	WL	GF	WP	AF	WH	ES	WC	LP

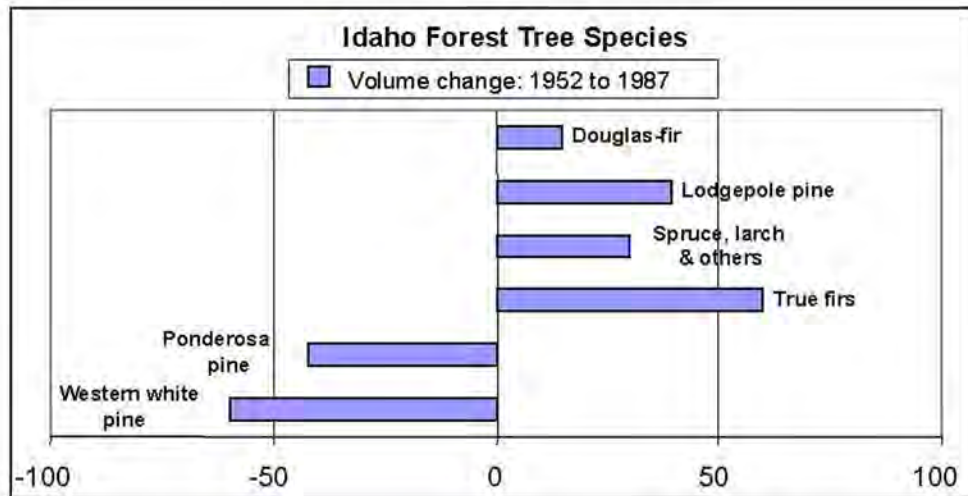
The definitions for the abbreviations of the tree species given in the table are as follows:

AF—subalpine fir  
 DF—Douglas-fir  
 ES—Engelmann spruce  
 GF—grand fir  
 LP—lodgepole pine  
 PP—ponderosa pine  
 WC—western redcedar  
 WH—western hemlock  
 WL—western larch  
 WP—western white pine

The historic occurrence of wildfires in the county greatly influenced the composition of forest tree species prior to the turn of the last century. Since that time, the composition of the trees in most of the forest stands has been altered by fire suppression and by preferential harvest of the higher value trees. In general, the relative proportion of the more valuable tree species, such as ponderosa pine, western white pine, and western larch, has decreased and there has been a corresponding increase in the proportion of Douglas-fir and grand fir (O'Laughlin and others, 1993).



Change in Tree Species in Idaho Forests



The vegetation classification system developed by the Forest Service and identified in the publication "Forest Habitat Types of Northern Idaho: A Second Approximation" (Cooper and others, 1991) was used for all of the forested soils in the survey area. Habitat types provide a basis for stratification of the soils based on plant association while providing a broad understanding of the environmental site parameters for the soils. The use of habitat types is widely accepted among forest managers as a tool for determining a wide variety of insights for management. The major forested soils in the survey area are identified to the "type" level of classification.

Forest productivity depends on the proper function of many interdependent soil and environmental factors at each site. Soil health and sustainability is influenced by the conservation measures applied during harvest and the management applied in the forests. The favorable influence of volcanic ash on the forested soils in the survey area is important. Ash tends to enhance the availability of moisture in the soil surface, which has a positive effect on the ability of a site to germinate and establish conifer seedlings along with a rich assortment of understory plants. Ash is also a good growth medium for soil organisms that can be beneficial to forest production and the availability of nutrients.

The nutrient status of a forested soil is a result mainly of the weathered parent material combined with the influence of ash, the soil integrity, and the past management of the site. Some base rock types, especially basalt, tend to have an inherently better nutrient status. Soils derived from certain metamorphic and sedimentary rock commonly are less fertile.


The level of potassium in forested soils is critical for current and future productivity and sustainability of the forest environment. As much as half of the available potassium on any given forest stand can be tied up in the above-ground tree vegetation, especially in the twigs and needles of the conifer trees on the site. The shade-tolerant and late seral species, such as grand fir and Douglas-fir, tend to contain large amounts of the available potassium. The nutrient balance of a forest is an important consideration for any kind of harvesting, pre-commercial thinning, or other forest conservation practice.

Woody material on the surface and in the profile of forested soils is important to the sustainability of the forests. Coarse woody debris, which includes the parts of tree trunks, limbs, and branches more than 3 inches in size and in various states of decomposition, can benefit forested soils by aiding in nutrient cycling, microbial functions, moisture conservation, and improvement of soil structure and function.

# Soil Survey of Clearwater Area, Idaho

The following guidelines should be followed during harvesting and management activities to retain large organic debris on the forest floor (Graham and others, 1994).

## Coarse Woody Debris Recommendations for Maintaining Forest Growth after Harvest in Idaho

	Habitat type series	Target tons per acre of coarse woody debris
Dry Forests	Ponderosa pine types	5-13
	Douglas-fir types	7-14
	Grand fir types	7-14
	Moist forests	Western hemlock types

Decay and cycling of organic matter, changes in nutrient status as a result of harvesting and other management activity, shifts in composition of tree species, altered fire regimes, and soil erosion and compaction have occurred during the last century in the forests of the survey area. These commonly have resulted in forest stands that are less healthy and less sustainable than those of pre-settlement times. Consequently, many stands are more susceptible to disease and insect infestations and a higher risk of larger, more intense wildfires.

Forest managers can help to restore proper ecological function and resilience in the forests by becoming familiar with the natural functions of the native forests in the survey area. This soil survey can assist land managers and decision makers in understanding the inherent potential and proper functioning of the soil resources in the area.

In the areas that border the Clearwater River and its primary tributaries, much of the forestland is on very steep mountain slopes. In the northern and eastern parts of the survey area, the forests are dominantly in nearly level to moderately sloping areas on plateaus. Forest harvesting methods are influenced by the steepness of the slope. If a ground-based system is used, erosion, compaction, and displacement of the soil should be carefully managed. Slopes of more than 35 percent generally are not suitable for ground machine skidding. High-lead or skyline systems are used for harvesting timber on these slopes.

Aspect, elevation, silvicultural history, seedbed condition, and soil characteristics influence the success of natural seedling germination, survival, and eventual establishment of mature trees in a forest stand. In areas where adequate silvicultural practices were not applied following past harvesting operations, regeneration of the more desirable tree species can be accomplished by planting trees. In some areas, pre-commercial or commercial thinning can shift the balance of forest species to those that are more suited to the area. Many forests were invaded by brush following more intense harvesting operations. These areas are virtually impossible to regenerate to forest species in a reasonable period of time without proper site preparation.

Careful placement and construction of logging roads, skid trails, and landings are necessary to prevent erosion, sedimentation, and compaction in most of the survey area during harvesting and improvement activities, particularly in the steeper areas (fig. 12). This survey identifies several soils that have subsoil material that can erode rapidly when exposed during roadbuilding. Soil slippage and landslides can also be a



Figure 12.—Early-day log deck. Photo courtesy of the Potlatch Corporation.

problem on some of the steeper soils. Proper design and application of road drainage systems are essential for maintaining the stability of the slopes of these soils. Also, many forested soils in the survey area have a seasonal perched water table, which results in the soil being wetter for longer periods during the year. These areas are subject to a higher risk of compaction and displacement when machinery is used.

More information on soil-related management interpretations and limitations for forested soils is given in tables 12 through 17. The information in the tables can help forest owners or managers plan the use of soils for wood crops. The tables show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forestland management.

## Forestland Productivity

In [table 12](#), the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

*Trees to manage* are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

## Forestland Management

In [tables 13, 14, 15, 16, and 17](#), interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for fire damage and seedling mortality are expressed as *low*, *moderate*, and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are



advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erosion factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

## Recreational Development

In [tables 18 and 19](#), the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot

be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in these tables can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

*Camp areas* require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, saturated hydraulic conductivity (Ksat), and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, saturated hydraulic conductivity (Ksat), and toxic substances in the soil.

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, saturated hydraulic conductivity (Ksat), and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, saturated hydraulic conductivity (Ksat), and toxic substances in the soil.

*Playgrounds* require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, saturated hydraulic conductivity (Ksat), and large stones. The soil properties that affect the growth of plants are depth to bedrock

or a cemented pan, saturated hydraulic conductivity (Ksat), and toxic substances in the soil.

*Paths and trails* for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

*Off-road motorcycle trails* require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

*Golf fairways* are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

## Wildlife Habitat

Compiled by Frank Fink, biologist, Natural Resources Conservation Service, from data provided by the Idaho Department of Fish and Game.

This section relates the general soil map units in the survey area to the expected occurrence of certain wildlife species. Wildlife species and their numbers in an area typically are related to the soils, vegetation, and water present. Vegetation is closely related to the soil and its capability to produce herbaceous and woody plants.

The survey area supports a variety of terrestrial and aquatic wildlife populations. The varied topography, soils, and climate and the many different land uses produce a wide variety of habitats for numerous wildlife species.

Habitats differ in their capacity to provide the essential food, water, and cover for various species. Some of these differences are related to the characteristics of the soils, the availability of water, and the affect of current management activities on the plant communities. In many areas, improvement of the habitat for fish and wildlife only requires a change in management practices.

The soil and availability of water determine the plant communities that provide food and cover for wildlife species. Habitat can be created or enhanced by planting appropriate vegetation to meet the needs of wildlife, maintaining the native plant community, or promoting natural establishment of desirable plants.

## Ungulates

Ungulates are the largest and most easily recognizable animals in the survey area. Elk, white-tailed deer, mule deer, and moose are the dominant big game species in the area.

Present-day elk populations in the survey area are some of the largest in the state. Historically, elk herds were scattered and small. In the early 1800's, Lewis and Clark found few big game animals along the Clearwater River, probably because of the dense, unbroken forest canopy that covered the area. Wildfires in the early part of the 20th century resulted in vast brushfields, which provided abundant forage for elk. Elk populations have declined since the 1950's, but they have begun to increase again in recent years.



Elk typically migrate between winter and summer ranges on fairly defined routes. Winter range in the survey area typically is at an elevation of less than 3,500 feet. During mild winters, elk may use range in areas as high as 5,000 feet. Depredation in winter can be a problem. Favorable winter range typically is on south-facing slopes, but all aspects provide range during mild winters. Redstem ceanothus is a key indicator of winter range. General soil map units 3 and 4 (canyons and benches) and units 5 and 6 (plateaus) provide most of the available winter range in the survey area.

Elk typically migrate to higher elevations for summer range. General soil map units 8, 9, and 10 (mountains) are used by elk in spring, summer, and fall. Units 1 and 2 (alluvium) dissect the mountainous areas, creating linear bands of riparian areas and a diverse habitat for these large ungulates.

White-tailed deer use the same range as elk, concentrating in the riparian areas for most of their life requisites. General soil map units 1 and 2 (alluvium) provide the best year-round habitat for white-tailed deer.

Mule deer are not numerous in the survey area because of limited habitat and competition with white-tailed deer. Some mule deer are in the drier canyons and plateaus along the Clearwater River. General soil map units 3, 4, and 7 (canyons and dry mountains) and units 5 and 6 (plateaus) provide the best habitat for mule deer. Areas that support dominantly tall brush, such as willow, ceanothus, syringa, and ninebark, are best suited.

Moose are associated with the riparian areas in general map unit 2 (alluvium) that dissect the mountains in general soil map unit 8 (mountains). Willow, dogwood, aspen, cottonwood, birch, alder, and serviceberry typically are the dominant species in these areas.

## Birds

Common upland game birds in the area include ruffed grouse, California quail, turkey, gray partridge, pheasant, and chukar.

Chukar are associated with rocky slopes, steep terrain, and riparian areas along the Clearwater River. Areas of general soil map unit 4 (canyonsides) associated with the Clearwater River provide the best habitat for chukar.

Pheasant and gray partridge are associated with the agricultural areas. These areas and the adjacent rangeland in general soil map units 3 (canyons) and 5 (plateaus) provide the best habitat for these birds, but it is limited. Winter habitat for these birds consists of the permanent herbaceous and woody vegetation adjacent to these map units.

Wild turkey has been introduced into the survey area. Riparian areas that support dominantly mature stands of woody vegetation provide an important habitat component for turkey. General soil map units 4 (benches) and 1 (alluvium) dissect the canyon and plateau areas and provide the best habitat for turkey.

Many nongame birds use the survey area for some or all of their life requisites. The diversity of plant communities and topographic relief result in a multitude of habitat types that support a variety of nongame species. The highest densities and most varieties of species are in the riparian areas of general soil map unit 1 (alluvium). The nongame birds include kingfishers, woodpeckers, larks, swallows, chickadees, wrens, thrashers, thrushes, flycatchers, vireos, warblers, finches, and sparrows. Poor management of riparian areas can severely limit the habitat for nongame species.

Waterfowl are concentrated along the major streams, rivers, wetlands, and reservoirs throughout the survey area. The Clearwater River and Dworshak Reservoir provide prime nesting and brood rearing habitat for green-winged teal, cinnamon teal, mallards, Canada geese, wood ducks, mergansers, goldeneye, and bufflehead. Tundra swan use the lower Clearwater River during migration.

Raptors use habitat in all of the general soil map units. The canyons (unit 4) and plateaus (unit 5) provide the best variety of nesting and feeding habitat for raptors.

Golden eagle, prairie falcon, red-tailed hawk, Swainson's hawk, Cooper's hawk, sharp-shinned hawk, and American kestrel use these areas during parts of their lifecycle. Osprey, bald eagle, and peregrine falcon use the Clearwater River, Dworshak Reservoir, and adjacent riparian areas for nesting and feeding.

## **Furbearers**

Furbearers, such as otter, beaver, mink, raccoon, and muskrat, live in and around the streams and reservoirs in the survey area. General soil map units 1 and 2 (alluvium) include the major riparian areas that provide the best habitat for these species.

Coyote, red fox, and skunk use habitat in all of the general soil map units. Bobcat, mountain lion, and martin are forest carnivores that use habitat in general soil map unit 8 (mountains).

## **Fisheries**

Both anadromous and resident salmonids use the rivers, streams, and reservoirs in the survey area. Spring/summer and fall Chinook salmon and steelhead migrate from the ocean to the Clearwater River and tributary streams for spawning. Perennial streams provide habitat for rearing until the fish migrate back to the ocean.

Resident fisheries provide habitat for rainbow trout, bull trout, kokanee, whitefish, shiner, dace, and brook trout. Streams and rivers are associated with general soil map units 8 and 9 (mountains). The condition of the stream habitat is limited in some areas because of poor water quality related to suspended sediment and water temperature. The condition of the riparian vegetation may have the most significant impact on the habitat for fish in the survey area.

## **Engineering**

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

*Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.*

*The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.*

*Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.*

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay

minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, saturated hydraulic conductivity (Ksat), corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

## Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. [Tables 20 and 21](#) show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Dwellings* are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Small commercial buildings* are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Local roads and streets* have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

*Shallow excavations* are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

*Lawns and landscaping* require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

## Sanitary Facilities

Table 22 shows the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations

generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Septic tank absorption fields* are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

*Sewage lagoons* are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (Ksat) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a Ksat rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

*Daily cover for landfill* is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.



Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

## Construction Materials

Tables 23 and 24 give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

*Gravel* and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 23, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good*, *fair*, or *poor* as potential sources of gravel and sand. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

*Topsoil* is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

*Reclamation material* is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

*Roadfill* is soil material that is excavated in one place and used in road embankments in another place. In the table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

The soils are rated *good*, *fair*, and *poor* as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, and roadfill. The lower the number, the greater the limitation.

## Water Management

Table 25 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas and embankments, dikes, and levees. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Pond reservoir areas* hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the saturated hydraulic conductivity (Ksat) of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

*Embankments, dikes, and levees* are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of 5 or 6 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.



## Soil Survey of Clearwater Area, Idaho

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.



# Soil Properties

---

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

## Engineering Properties

[Table 26](#) gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Texture* is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

*Classification* of the soils is determined according to the Unified soil classification system (ASTM, 2005; PCA, 1962) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004; PCA, 1962).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

*Rock fragments* larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

*Percentage (of soil particles) passing designated sieves* is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

*Liquid limit* and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

## Physical Properties

Table 27 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (*K<sub>sat</sub>*), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

*Clay* as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

*Moist bulk density* is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at  $1/3$ - or  $1/10$ -bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

*Saturated hydraulic conductivity (K<sub>sat</sub>)* refers to the ability of a soil to transmit water or air. The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (*K<sub>sat</sub>*) is considered in the design of soil drainage systems and septic tank absorption fields.

*Available water capacity* refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

*Linear extensibility* refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at  $1/3$ - or  $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

*Organic matter* is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

*Erosion factors* are shown in the table as the K factor ( $K_w$  and  $K_f$ ) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity ( $K_{sat}$ ). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

*Erosion factor  $K_w$*  indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

*Erosion factor  $K_f$*  indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

*Erosion factor T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

*Wind erodibility index* is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter,

and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

## Chemical Properties

Table 28 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Cation-exchange capacity (CEC)* is the total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams. It commonly is measured at neutral pH of 7.0 (CEC-7), but it may be measured at some other stated pH value. Soils that have a low CEC hold fewer cations and may require more frequent applications of fertilizer than those that have a high CEC. The ability to retain cations minimizes the risk of ground-water pollution.

*Effective cation-exchange capacity (ECEC)* refers to the sum of exchangeable cations plus aluminum, expressed in terms of milliequivalents per 100 grams. It is determined for soils that have natural pH of less than or equal to 5.5 and is a measure of the CEC at the natural pH. In soils with low pH, the ECEC more accurately reflects the actual CEC of the soils. Although CEC-7 is not actually present in these soils under natural conditions, the ECEC reflects the potential CEC if the soils are limed and the pH increased to neutral.

*Soil reaction* is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

*Calcium carbonate* equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil.

*Gypsum* is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

*Salinity* is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

*Sodium adsorption ratio (SAR)* is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

## Water Features

Table 29 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

*Hydrologic soil groups* are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not



protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

*Water table* refers to a saturated zone in the soil. The table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

*Ponding* is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

*Flooding* is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

*Duration* and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more

than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

## Soil Features

[Table 30](#) gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

*Subsidence* is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

*Potential for frost action* is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, saturated hydraulic conductivity (Ksat), content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

*Risk of corrosion* pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

# Classification of the Soils

---

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. The categories are defined in the following paragraphs.

**ORDER.** Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

**SUBORDER.** Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

**GREAT GROUP.** Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

**SUBGROUP.** Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. An example is Andic Hapludalfs.

**FAMILY.** Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-silty, mixed, superactive, frigid Andic Hapludalfs.

**SERIES.** The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

[Table 31](#) indicates the order, suborder, great group, subgroup, and family of the soil series in the survey area.

## Taxonomic Units and Their Morphology

In this section, each taxonomic unit recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

unit. A pedon, a small three-dimensional area of soil, that is typical of the unit in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993) and in the "Field Book for Describing and Sampling Soils" (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (Soil Survey Staff, 1999) and in "Keys to Soil Taxonomy" (Soil Survey Staff, 1998). Unless otherwise indicated, colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the taxonomic unit.

## **Agatha Series**

*Depth class:* Deep to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, rims, structural benches

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 15 to 75 percent

*Elevation:* 1,100 to 3,200 feet

*Mean annual precipitation:* 24 to 33 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Vitrandic Haploxeralfs

### **Typical Pedon**

Agatha ashy silt loam in an area of Agatha-Rock outcrop complex, 35 to 75 percent slopes, Latah County, Idaho; about 1 mile southeast of Troy, Idaho; about 1,970 feet south and 1,400 feet west of the northeast corner of section 18, T. 39 N., R. 3 W.; latitude 46 degrees, 43 minutes, 27 seconds north and longitude 116 degrees, 45 minutes, 20 seconds west; U.S. Geological Survey Troy Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oa—1 to 2 inches; highly decomposed plant material.

A—2 to 5 inches; brown (10YR 5/3) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many fine interstitial pores; 5 percent gravel; neutral (pH 6.6); clear smooth boundary.

AB—5 to 9 inches; brown (7.5YR 5/4) gravelly ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine tubular pores; 20 percent gravel and 10 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.

Bt1—9 to 20 inches; light brown (7.5YR 6/4) very gravelly silt loam, dark brown (7.5YR 3/4) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium and few coarse roots; many fine tubular pores; 30 percent gravel and 10 percent cobbles; few distinct clay films lining pores; few clean silt grains on faces of peds; slightly acid (pH 6.4); gradual wavy boundary.

Bt2—20 to 44 inches; light brown (7.5YR 6/4) extremely cobbly silty clay loam, dark brown (7.5YR 3/4) moist; moderate fine angular blocky structure; very hard, firm, moderately sticky and moderately plastic; common fine and medium roots; many fine tubular pores; 20 percent gravel, 40 percent cobbles, and 2 percent stones; common distinct clay films lining pores and on faces of peds; common fine iron and manganese concretions less than 1 millimeter in diameter; moderately acid (pH 6.0); abrupt wavy boundary.

Bt3—44 to 60 inches; light brown (7.5YR 6/4) extremely cobbly silty clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse angular blocky structure; very hard, firm, moderately sticky and moderately plastic; common fine and medium roots; many fine tubular pores; 30 percent gravel, 30 percent cobbles, and 2 percent stones; many prominent clay films lining pores and on faces of peds; many clean silt grains on faces of peds; common fine iron and manganese concretions less than 1 millimeter in diameter; moderately acid (pH 6.0); abrupt wavy boundary.

R—60 inches; hard basalt.

### ***Range in Characteristics***

*Depth to basalt:* 40 to 60 inches

## ***Ahsahka Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands

*Landform:* Canyons

*Parent material:* Loess and/or alluvium derived from granite

*Slope range:* 20 to 55 percent

*Elevation:* 1,000 to 2,800 feet

*Mean annual precipitation:* 24 to 25 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Typic Argixerolls

### ***Typical Pedon***

Ahsahka silt loam in an area of Ahsahka-Fordcreek complex, 20 to 40 percent slopes, about 0.5 mile north of Orofino, Idaho; about 800 feet north and 1,825 feet east of the southwest corner of section 6, T. 36 N., R. 2 E.; latitude 46 degrees, 29 minutes, 17 seconds north and longitude 116 degrees, 15 minutes, 22 seconds west; U.S. Geological Survey Orofino West Quadrangle.

A—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots throughout; common fine and medium and few coarse irregular pores; slightly acid (pH 6.4); clear wavy boundary.

AB—6 to 16 inches; brown (10YR 4/3) silt loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure parting to strong medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium, and few coarse roots throughout; common very fine tubular pores and common fine irregular pores; neutral (pH 6.8); clear wavy boundary.

Bt1—16 to 22 inches; yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium, and few coarse roots throughout; common very fine tubular pores and common fine and medium irregular pores; few faint clay films in pores; neutral (pH 6.9); clear wavy boundary.

Bt2—22 to 35 inches; yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 3/4) moist; strong fine and medium subangular blocky structure; moderately



hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots throughout; common very fine tubular pores and few very fine irregular pores; few faint clay films on faces of peds and in pores; neutral (pH 6.9); abrupt wavy boundary.

2Bt3—35 to 43 inches; brown (7.5YR 4/4) clay, dark brown (7.5YR 3/4) moist; strong fine angular blocky structure; moderately hard, firm, very sticky and very plastic; few very fine, fine, and medium roots throughout; few very fine tubular and irregular pores; few distinct clay films in pores; neutral (pH 6.6); clear wavy boundary.

2Bt4—43 to 51 inches; brown (7.5YR 5/4) clay, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; moderately hard, firm, very sticky and very plastic; few very fine, fine, and medium roots throughout; common very fine tubular pores; common distinct clay films in pores; neutral (pH 6.9); clear wavy boundary.

2Bt5—51 to 60 inches; brown (7.5YR 5/4) clay loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots throughout; many very fine tubular pores; common distinct clay films in pores; 5 percent gravel; neutral (pH 7.1).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 11 to 19 inches

## ***Aldermant Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, mountains, plateaus

*Landform:* Canyons, hillslopes, mountain slopes

*Parent material:* Volcanic ash and/or alluvium derived from granite and/or metamorphic rock

*Slope range:* 20 to 75 percent

*Elevation:* 1,600 to 4,600 feet

*Mean annual precipitation:* 27 to 60 inches

*Mean annual air temperature:* 38 to 45 degrees F

*Frost-free period:* 50 to 125 days

*Taxonomic class:* Coarse-loamy, isotic, frigid Vitrandic Eutrudepts

### ***Typical Pedon***

Aldermant ashy loam, 35 to 75 percent slopes, about 6 miles north of Ahsahka, Idaho; about 650 feet north and 1,150 feet east of the southwest corner of section 35, T. 38 N., R. 1 E.; latitude 46 degrees, 35 minutes, 12 seconds north and longitude 116 degrees, 18 minutes, 13 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 7 inches; brown (7.5YR 5/3) ashy loam, dark brown (7.5YR 3/3) moist; weak fine granular structure; loose, slightly sticky and nonplastic; many very fine and common fine and medium roots throughout; many very fine and fine and few medium irregular pores; 2 percent fine rounded iron-manganese concretions; 2 percent fine mica flakes; 3 percent fine gravel; neutral (pH 7.2); clear smooth boundary.



- Bw1—7 to 12 inches; brown (7.5YR 5/3) ashy loam, dark brown (7.5YR 3/3) moist; weak very fine and fine subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and nonplastic; many very fine, common fine and medium, and few coarse roots throughout; many very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; 5 percent fine mica flakes; 3 percent fine gravel; neutral (pH 7.1); clear wavy boundary.
- Bw2—12 to 17 inches; yellowish brown (10YR 5/4) ashy loam, dark brown (10YR 3/3) moist; weak very fine and fine subangular blocky structure parting to moderate fine granular; soft, very friable, slightly sticky and nonplastic; many very fine, common fine, and few coarse roots throughout; many very fine and common fine irregular pores; 2 percent fine rounded iron-manganese concretions; 5 percent fine mica flakes; 5 percent fine gravel; neutral (pH 6.9); clear wavy boundary.
- 2Bw3—17 to 25 inches; light yellowish brown (10YR 6/4) sandy loam, dark brown (10YR 3/3) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots; common very fine and few fine irregular pores and common very fine tubular pores; 5 percent fine mica flakes; 10 percent gravel; slightly acid (pH 6.3); gradual wavy boundary.
- 2BC—25 to 33 inches; light yellowish brown (10YR 6/4) sandy loam, dark brown (10YR 3/3) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots throughout; common very fine and few fine irregular pores and common very fine tubular pores; 10 percent fine mica flakes; 10 percent gravel; slightly acid (pH 6.3); gradual wavy boundary.
- 2C1—33 to 44 inches; pale brown (10YR 6/3) gravelly sandy loam, dark brown (10YR 3/3) moist; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine roots throughout; many very fine and common fine irregular pores; 15 percent fine mica flakes; 25 percent gravel; slightly acid (pH 6.3); gradual wavy boundary.
- 2C2—44 to 62 inches; pale brown (10YR 6/3) very stony loamy sand, dark brown (10YR 3/3) moist; massive; loose, nonsticky and nonplastic; few very fine and fine roots throughout; many very fine and common fine irregular pores; 15 percent fine mica flakes; 20 percent gravel and 35 percent stones; slightly acid (pH 6.4).

## ***Aquandic Cryaquepts***

*Depth class:* Very deep

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 5 percent

*Elevation:* 2,200 to 4,800 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

*Taxonomic class:* Aquandic Cryaquepts

### ***Typical Pedon***

Aquandic Cryaquepts ashy fine sandy loam in an area of Aquandic Cryaquepts, 0 to 5 percent slopes, about 8 miles northeast of Elk River, Idaho; about 850 feet south

## Soil Survey of Clearwater Area, Idaho

and 2,230 feet east of the northwest corner of section 19, T. 41 N., R. 3 E.; latitude 46 degrees, 53 minutes, 23 seconds north and longitude 116 degrees, 8 minutes, 17 seconds west; U.S. Geological Survey Anthony Peak Quadrangle.

- A1—0 to 8 inches; dark yellowish brown (10YR 4/4) ashy fine sandy loam, very dark brown (7.5YR 2.5/3) moist; few fine very dark brown (7.5YR 2.5/2) redoximorphic concentrations; weak fine and medium granular structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine roots; common very fine tubular pores; 2 percent fine mica flakes; very strongly acid (pH 4.8); abrupt wavy boundary.
- A2—8 to 18 inches; brown (10YR 5/3) loam, very dark brown (7.5YR 2.5/3) moist; common fine faint redoximorphic concentrations that are brown (7.5YR 3/4) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, friable, nonsticky and nonplastic; many very fine and fine roots; common very fine tubular pores; 2 percent fine mica flakes; very strongly acid (pH 4.7); clear smooth boundary.
- A3—18 to 27 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; common fine distinct dark yellowish brown (10YR 3/4) redoximorphic concentrations; common fine very dark grayish brown (10YR 3/2) redoximorphic depletions; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine and common fine roots; few very fine tubular pores and common very fine irregular pores; 5 percent fine mica flakes; very strongly acid (pH 4.8); abrupt smooth boundary.
- Cg1—27 to 34 inches; grayish brown (10YR 5/2) fine sandy loam, very dark gray (5Y 3/1) moist; few fine prominent dark yellowish brown (10YR 3/4) redoximorphic concentrations; massive; hard, friable, nonsticky and nonplastic; common very fine roots; few very fine tubular and irregular pores; 10 percent fine mica flakes; very strongly acid (pH 4.8); clear smooth boundary.
- Cg2—34 to 54 inches; brown (10YR 5/3) sandy loam, black (5Y 2.5/1) moist; few fine prominent dark yellowish brown (10YR 3/4) redoximorphic concentrations; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; few very fine irregular pores; 20 percent fine mica flakes; very strongly acid (pH 4.9); abrupt wavy boundary.
- Cg3—54 to 60 inches; brown (10YR 5/3), stratified very gravelly loam to very cobbly sand, dark olive brown (2.5Y 3/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; common very fine tubular pores; 30 percent fine mica flakes; 15 percent gravel and 20 percent cobbles; very strongly acid (pH 5.0).

### ***Range in Characteristics***

*Depth to seasonal high apparent water table:* At the surface to a depth of 24 inches in December through March

*Flooding:* Frequent, brief periods in November through June

### ***Aquandic Dystrudepts***

*Depth class:* Very deep

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Drainageways, flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 10 percent

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 35 to 50 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Aquandic Dystrudepts

### **Typical Pedon**

Aquandic Dystrudepts gravelly ashy loam in an area of Aquandic Endoaquepts and Aquandic Dystrudepts soils, 0 to 10 percent slopes, about 1 mile south of Pierce, Idaho; about 2,300 feet south and 2,000 feet east of the northwest corner of section 11, T. 36 N., R. 5 E.; latitude 46 degrees, 28 minutes, 41 seconds north and longitude 115 degrees, 47 minutes, 51 seconds west; U.S. Geological Survey Pierce Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A1—2 to 5 inches; dark brown (10YR 3/3) gravelly ashy loam, dark brown (10YR 3/3) moist; few fine faint strong brown (7.5YR 5/6) redoximorphic concentrations; weak fine and medium subangular blocky structure parting to common very fine and fine granular; soft, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; 20 percent gravel; slightly acid (pH 6.4); clear wavy boundary.

A2—5 to 10 inches; brown (10YR 4/3) gravelly ashy loam, dark brown (10YR 3/3) moist; few fine faint dark yellowish brown (10YR 4/6) redoximorphic concentrations; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine and fine roots; common very fine and fine irregular pores; 30 percent gravel; slightly acid (pH 6.2); gradual wavy boundary.

Bw1—10 to 15 inches; brown (10YR 5/3) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; common fine distinct strong brown (7.5YR 5/6) redoximorphic concentrations; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine irregular pores; 35 percent gravel and 10 percent cobbles; moderately acid (pH 6.0); gradual wavy boundary.

Bw2—15 to 24 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; common very fine and fine prominent strong brown (7.5YR 5/6) redoximorphic concentrations; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine irregular pores; 50 percent gravel and 20 percent cobbles; moderately acid (pH 6.0); abrupt wavy boundary.

Bw3—24 to 31 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; common very fine and fine prominent strong brown (7.5YR 5/6) redoximorphic concentrations; few fine distinct dark grayish brown (10YR 4/2) redoximorphic depletions; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common fine and medium irregular pores; 45 percent gravel and 25 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.

C1—31 to 47 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; common fine and medium prominent strong brown (7.5YR 5/6) redoximorphic concentrations; few very fine distinct dark grayish brown (10YR 4/2) redoximorphic depletions; massive; soft, friable, slightly sticky and slightly plastic; common very fine roots; common fine and medium irregular pores; 90 percent gravel; moderately acid (pH 6.0); gradual wavy boundary.

C2—47 to 58 inches; brown (10YR 5/3) extremely gravelly sandy loam, brown (10YR 4/3) moist; common fine and medium prominent strong brown (7.5YR 5/6) redoximorphic concentrations; few very fine distinct dark grayish brown (10YR 4/2)

## Soil Survey of Clearwater Area, Idaho

redoximorphic depletions; massive; soft, friable, slightly sticky and slightly plastic; common very fine roots; common fine and medium irregular pores; 70 percent gravel and 15 percent cobbles; moderately acid (pH 5.8); gradual wavy boundary. C3—58 to 70 inches; brown (10YR 5/3) extremely gravelly sandy loam, brown (10YR 4/3) moist; common fine and medium prominent strong brown (7.5YR 5/6) redoximorphic concentrations; common medium distinct very dark grayish brown (2.5Y 3/2) redoximorphic depletions; massive; soft, friable, slightly sticky and slightly plastic; few very fine roots; common very fine and fine irregular pores; 65 percent gravel and 20 percent cobbles; moderately acid (pH 5.8).

### ***Range in Characteristics***

*Depth to seasonal high apparent water table:* 7 to 19 inches in February and March

*Flooding:* Occasional, brief periods in January through May

### ***Aquandic Endoaquepts***

*Depth class:* Very deep

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Drainageways

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Aquandic Endoaquepts

### ***Typical Pedon***

Aquandic Endoaquepts ashy silt loam in an area of Caseycreek ashy silt loam, 2 to 15 percent slopes, about 7 miles northeast of Southwick, Idaho; about 2,100 feet south and 300 feet east of the northwest corner of section 21, T. 39 N., R. 1 E.; latitude 46 degrees, 42 minutes, 39 seconds north and longitude 116 degrees, 21 minutes, 0 seconds west; U.S. Geological Survey Aldermand Ridge Quadrangle.

A1—0 to 4 inches; grayish brown (10YR 5/2) ashy silt loam, dark grayish brown (10YR 4/2) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine irregular pores; 5 percent fine mica flakes; strongly acid (pH 5.4); clear wavy boundary.

A2—4 to 10 inches; grayish brown (10YR 5/2) ashy silt loam, dark grayish brown (10YR 4/2) moist; common fine distinct dark yellowish brown (10YR 3/4) redoximorphic concentrations; moderate fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine irregular pores; 5 percent fine mica flakes; strongly acid (pH 5.2); abrupt wavy boundary.

Bg1—10 to 14 inches; gray (10YR 5/1) silt loam, very dark grayish brown (10YR 3/2) moist; many fine and medium prominent dark yellowish brown (10YR 3/4) redoximorphic concentrations; moderate medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; 5 percent fine mica flakes; very strongly acid (pH 5.0); clear wavy boundary.

Bg2—14 to 18 inches; gray (10YR 6/1) silt loam, dark gray (10YR 4/1) moist; many medium prominent dark yellowish brown (10YR 3/6) redoximorphic concentrations;

- moderate medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; 10 percent fine mica flakes; strongly acid (pH 5.1); clear wavy boundary.
- Bg3—18 to 22 inches; light brownish gray (10YR 6/2) silt loam, grayish brown (10YR 5/2) moist; many medium prominent dark yellowish brown (10YR 4/4) redoximorphic concentrations; moderate medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and fine irregular pores; 15 percent fine mica flakes; very strongly acid (pH 5.0); clear wavy boundary.
- Bg4—22 to 30 inches; gray (10YR 6/1) loam, gray (10YR 5/1) moist; many medium prominent dark yellowish brown (10YR 3/6) redoximorphic concentrations; moderate medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many very fine and fine irregular pores; 15 percent fine mica flakes; very strongly acid (pH 4.8); clear wavy boundary.
- Bg5—30 to 34 inches; gray (10YR 6/1) loam, gray (10YR 5/1) moist; many medium prominent dark yellowish brown (10YR 3/6) and common coarse dark yellowish brown (10YR 3/4) redoximorphic concentrations; massive; soft, friable, nonsticky and nonplastic; many very fine and fine irregular pores; 25 percent fine mica flakes; moderately acid (pH 5.7); clear wavy boundary.
- Bg6—34 to 45 inches; 50 percent light gray (10YR 7/1) silt loam, gray (10YR 5/1) moist, and 50 percent light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; many medium prominent dark yellowish brown (10YR 3/6) redoximorphic concentrations; massive; soft, friable, slightly sticky and slightly plastic; many very fine and fine irregular pores; 10 percent fine mica flakes; moderately acid (pH 5.6); clear wavy boundary.
- Bg7—45 to 52 inches; gray (10YR 6/1) loam, gray (10YR 5/1) moist; many medium prominent dark yellowish brown (10YR 3/4) redoximorphic concentrations; massive; soft, very friable, nonsticky and nonplastic; many very fine and fine irregular pores; 10 percent fine mica flakes; very strongly acid (pH 5.0); clear wavy boundary.
- C—52 to 60 inches; gray (10YR 5/1) sandy loam, dark gray (10YR 4/1) moist; many medium prominent dark yellowish brown (10YR 3/6) redoximorphic concentrations; massive; soft, very friable, nonsticky and nonplastic; many very fine and fine irregular pores; 20 percent fine mica flakes; moderately acid (pH 5.8).

### ***Range in Characteristics***

*Depth to seasonal high apparent water table:* At the surface to a depth of 24 inches in December through March

*Flooding:* Occasional, brief periods in December through June

### ***Bandmill Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Hills, structural benches

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 5 to 35 percent

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days



*Taxonomic class:* Fine-silty, mixed, superactive, frigid Andic Hapludalfs

***Typical Pedon***

Bandmill ashy silt loam in an area of Bandmill-Riswold complex, 5 to 20 percent slopes, about 9 miles east of Orofino, Idaho; about 1,500 feet south and 1,450 feet west of northeast corner of section 10, T. 36 N., R. 3 E.; latitude 46 degrees, 28 minutes, 52 seconds north and longitude 116 degrees, 3 minutes, 54 seconds west; U.S. Geological Survey Rudo Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 3 inches; strong brown (7.5YR 4/6) ashy silt loam, dark brown (7.5YR 3/3) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; neutral (pH 6.6); abrupt wavy boundary.

Bw—3 to 10 inches; brown (7.5YR 5/4) ashy silt loam, brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine and common medium and coarse roots throughout; many very fine and fine irregular pores and common fine tubular pores; 2 percent fine and medium rounded iron-manganese concretions; slightly acid (pH 6.2); abrupt wavy boundary.

2Bt1—10 to 17 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine and common medium roots between peds; many very fine and fine irregular pores and common fine tubular pores; many distinct clay films that are brown (7.5YR 4/4) moist and are on faces of peds and in pores; common distinct very pale brown (10YR 7/3) skeletans in pores; 2 percent medium rounded iron-manganese concretions; 1 percent fine mica flakes; slightly acid (pH 6.2); clear wavy boundary.

2Bt2—17 to 21 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots between peds; many very fine and fine irregular pores and common fine tubular pores; many distinct clay films that are brown (7.5YR 4/4) moist and are on faces of peds and in pores; many distinct very pale brown (10YR 7/3) skeletans on faces of peds and in pores; 2 percent fine rounded iron-manganese concretions; 1 percent fine mica flakes; moderately acid (pH 6.0); abrupt wavy boundary.

2E/Bt—21 to 27 inches; 70 percent E material that is very pale brown (10YR 7/3) silt loam, brown (10YR 4/3) moist, and 30 percent B material that is light brown (7.5YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots between peds; common very fine and fine irregular pores and few very fine tubular pores; many distinct clay films that are brown (7.5YR 4/4) moist and are on faces of peds and in pores; common distinct very pale brown (10YR 7/3) skeletans in pores; common fine and medium rounded iron-manganese concretions; 3 percent gravel; moderately acid (pH 5.6); abrupt wavy boundary.

3Btb1—27 to 34 inches; light brown (7.5YR 6/4) silty clay loam, brown (7.5YR 5/4) moist; weak coarse prismatic structure parting to strong fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots between peds; common very fine and fine irregular pores and few very fine tubular pores; many prominent skeletans on faces of peds; 1 percent medium rounded iron-manganese concretions; 3 percent gravel; very strongly acid (pH 4.6); clear wavy boundary.



3Btb2—34 to 62 inches; brown (7.5YR 5/4) silty clay loam, strong brown (7.5YR 4/6) moist; weak coarse prismatic structure parting to strong fine and medium subangular blocky; very hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots between peds; common very fine and fine irregular pores and few very fine tubular pores; many prominent skeletal on faces of peds; 10 percent gravel; strongly acid (pH 5.4).

***Range in Characteristics***

*Thickness of volcanic ash mantle:* 8 to 13 inches

***Bargamin Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 10 to 35 percent

*Elevation:* 3,100 to 3,400 feet

*Mean annual precipitation:* 35 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over mixed, active, frigid Alfic Udivitrands

***Typical Pedon***

Bargamin ashy silt loam in an area of Bandmill-Grangemont-Bargamin complex, 10 to 35 percent slopes, about 3.5 miles east of Grangemont, Idaho; about 100 feet south and 2,550 feet west of the northeast corner of section 28, T. 37 N., R. 4 E.; latitude 46 degrees, 31 minutes, 41 seconds north and longitude 115 degrees, 57 minutes, 29 seconds west; U.S. Geological Survey Whiskey Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 2 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine and common fine and medium roots; many very fine and common fine irregular pores; slightly acid (pH 6.2); clear wavy boundary.

Bw1—2 to 8 inches; brownish yellow (10YR 6/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine and common fine, medium, and coarse roots; many very fine and common fine irregular pores; moderately acid (pH 6.0); clear wavy boundary.

Bw2—8 to 17 inches; brownish yellow (10YR 6/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, common fine and medium, and few coarse roots; many very fine and common fine irregular pores; moderately acid (pH 6.0); abrupt wavy boundary.

2Bt1—17 to 29 inches; yellowish brown (10YR 5/4) silt loam, brown (7.5YR 4/4) moist; weak medium prismatic structure parting to moderate fine, medium, and coarse subangular blocky; slightly hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; many very fine and few fine tubular pores and common very fine and fine irregular pores; common

- faint clay films lining pores and on faces of peds; 5 percent fine rounded iron-manganese concretions; moderately acid (pH 5.8); gradual wavy boundary.
- 2Bt2—29 to 38 inches; light yellowish brown (10YR 6/4) silt loam, brown (7.5YR 4/4) moist; weak medium prismatic structure parting to strong fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium roots; many very fine and fine and few medium tubular pores and common very fine and fine irregular pores; common faint clay films lining pores and on faces of peds; common faint skeletons on vertical faces of peds; 5 percent fine rounded iron-manganese concretions; moderately acid (pH 5.8); clear wavy boundary.
- 3Btb1—38 to 49 inches; brown (7.5YR 5/4) silty clay loam, reddish brown (5YR 4/4) moist; weak medium prismatic structure parting to strong very fine, fine, and medium subangular blocky; very hard, friable, very sticky and very plastic; few very fine roots; common very fine tubular pores and common very fine and few fine and medium irregular pores; many distinct clay films lining pores and on faces of peds; few prominent iron-manganese stains that are dark reddish brown (5YR 3/2) moist and on faces of peds; moderately acid (pH 5.6); gradual wavy boundary.
- 3Btb2—49 to 61 inches; brown (7.5YR 4/4) silty clay, dark reddish brown (2.5YR 3/4) moist; weak medium prismatic structure parting to strong very fine, fine, and medium subangular blocky; very hard, friable, very sticky and very plastic; few very fine roots; common very fine and few fine tubular pores and common very fine irregular pores; many distinct clay films lining pores and on faces of peds; 5 percent prominent iron-manganese stains that are black (5YR 2/2) moist and on faces of peds; moderately acid (pH 5.6); gradual wavy boundary.
- 3Btb3—61 to 65 inches; brown (7.5YR 4/4) silty clay, dark red (2.5YR 3/6) moist; moderate medium prismatic structure parting to strong fine and medium subangular blocky; very hard, firm, very sticky and very plastic; few very fine roots; common very fine and fine tubular pores and common very fine irregular pores; many distinct clay films lining pores and on faces of peds; 15 percent prominent iron-manganese stains that are black (5YR 2/2) moist and on faces of peds; strongly acid (pH 5.4).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 17 inches

### ***Berthahill Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 75 percent

*Elevation:* 4,500 to 5,500 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 41 degrees

*Taxonomic class:* Medial over loamy-skeletal, amorphic over isotic Typic Haplocryands

### ***Typical Pedon***

Berthahill medial loam ([fig. 13](#)) in an area of Berthahill-Handoff complex, 35 to 75 percent slopes, about 9 miles north of Headquarters, Idaho; about 500 feet south and 450 feet east of the northwest corner of section 1, T. 39 N., R. 5 E.; latitude

## Soil Survey of Clearwater Area, Idaho

46 degrees, 45 minutes, 33 seconds north and longitude 115 degrees, 46 minutes, 59 seconds west; U.S. Geological Survey Bertha Hill Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 4 inches; moderately decomposed plant material.



**Figure 13.—**Typical profile of a Berthahill soil. The volcanic ash mantle extends from the surface of the mineral soil material to a depth of 20 inches (A and Bw horizons). The ochric epipedon extends from the surface of the mineral soil material to a depth of 11 inches (A horizon). The cambic horizon is between depths of 11 and 28 inches (Bw and 2Bw horizons). The argillic horizon is between depths of 28 and 66 inches (2Bt horizon). The particle-size control section is between depths of 4 and 44 inches (A, Bw, 2Bw, and 2Bt1 horizons and part of 2Bt2 horizon).

## Soil Survey of Clearwater Area, Idaho

- A—4 to 11 inches; brown (10YR 4/3) medial loam, dark brown (7.5YR 3/3) moist; weak very fine and fine granular structure; very soft, very friable, nonsticky and nonplastic; many fine to coarse roots; many very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; 10 percent fine gravel; slightly acid (pH 6.2); clear smooth boundary.
- Bw1—11 to 20 inches; brown (7.5YR 5/4) medial loam, dark brown (7.5YR 3/4) moist; weak fine and medium granular structure; very soft, very friable, nonsticky and nonplastic; many fine to coarse roots; many very fine irregular pores; 2 percent fine rounded iron-manganese concretions; 10 percent fine gravel; slightly acid (pH 6.2); abrupt smooth boundary.
- 2Bw2—20 to 28 inches; yellowish brown (10YR 5/6) gravelly sandy loam, strong brown (7.5YR 5/6) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium roots; many very fine and fine irregular and tubular pores; 20 percent gravel and 5 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.
- 2Bt1—28 to 40 inches; light brown (7.5YR 6/4) very gravelly loam, strong brown (7.5YR 5/6) moist; weak medium and coarse subangular blocky structure parting to moderate very fine and fine subangular blocky; slightly hard, firm, moderately sticky and slightly plastic; common very fine and fine roots between peds; common very fine and fine tubular pores; few patchy faint brown (7.5YR 4/4) clay films on faces of peds; 30 percent gravel and 15 percent cobbles; strongly acid (pH 5.1); clear wavy boundary.
- 2Bt2—40 to 55 inches; brownish yellow (10YR 6/6) extremely cobbly sandy loam, yellowish brown (10YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, firm, moderately sticky and slightly plastic; few very fine and fine roots between peds; common very fine tubular pores; common discontinuous distinct brown (7.5YR 4/4) clay films on faces of peds; 20 percent gravel, 35 percent cobbles, and 15 percent stones; very strongly acid (pH 4.8); gradual smooth boundary.
- 2Bt3—55 to 66 inches; brownish yellow (10YR 6/6) extremely cobbly sandy loam, yellowish brown (10YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few very fine roots between peds; common very fine tubular pores; few patchy faint yellowish brown (10YR 5/6) clay films on faces of peds; 20 percent gravel, 50 percent cobbles, and 15 percent stones; very strongly acid (pH 4.6).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 18 inches

### ***Bigtalk Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Colluvium derived from anorthosite and/or gneiss

*Slope range:* 15 to 65 percent

*Elevation:* 1,600 to 4,400 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Typic Eutrudepts



***Typical Pedon***

Bigtalk loam in an area of Longbar-Bigtalk complex, 35 to 65 percent slopes, about 16 miles north of Headquarters, Idaho; about 1,500 feet north and 2,400 feet west of the southeast corner of section 23, T. 41 N., R. 5 E.; latitude 46 degrees, 52 minutes, 51 seconds north and longitude 115 degrees, 47 minutes, 38 seconds west; U.S. Geological Survey Little Goat Mountains Quadrangle.

Oe—0 to 1 inch; moderately decomposed plant material.

A1—1 to 3 inches; dark grayish brown (10YR 4/2) loam, very dark brown (10YR 2/2) moist; moderate very fine and fine granular structure; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; 10 percent fine mica flakes; slightly acid (pH 6.4); abrupt wavy boundary.

A2—3 to 8 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine irregular pores and few medium tubular pores; 10 percent fine mica flakes; 2 percent fine gravel; slightly acid (pH 6.2); abrupt wavy boundary.

Bt1—8 to 15 inches; brown (10YR 5/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; many very fine and fine roots between peds and common medium and coarse roots throughout; many very fine and fine irregular pores and common fine and medium tubular pores; few faint clay films in root channels and/or pores; 20 percent fine mica flakes; slightly acid (pH 6.2); clear wavy boundary.

Bt2—15 to 24 inches; pale brown (10YR 6/3) loam, strong brown (7.5YR 4/6) moist; strong medium and coarse subangular blocky structure; hard, firm, slightly sticky and moderately plastic; common very fine and fine roots between peds and common medium and coarse roots throughout; common very fine and fine irregular pores and common very fine and medium tubular pores; few faint clay films in root channels and/or pores; 20 percent fine mica flakes; 2 percent fine gravel; moderately acid (pH 6.0); clear wavy boundary.

Bt3—24 to 35 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/6) moist; strong fine and medium subangular structure; hard, firm, slightly sticky and slightly plastic; common fine and medium roots between peds; common very fine irregular pores and common very fine and few fine and medium tubular pores; few faint clay films in root channels and/or pores; 20 percent fine mica flakes; 5 percent gravel; moderately acid (pH 5.8); clear wavy boundary.

BC—35 to 48 inches; very pale brown (10YR 7/4) gravelly loam, yellowish brown (10YR 5/6) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine and medium roots between peds; common very fine irregular pores and few very fine and fine tubular pores; common 1/8-inch-thick clay bands that are 1 inch apart; 15 percent fine mica flakes; 15 percent gravel and 10 percent cobbles; moderately acid (pH 5.6); clear wavy boundary.

C—48 to 61 inches; very pale brown (10YR 7/4) fine sandy loam, yellowish brown (10YR 5/6) moist; massive; hard, friable, nonsticky and nonplastic; common fine roots in cracks; common very fine irregular pores and few very fine and fine tubular pores; numerous thin (less than 1/8 inch thick) clay bands in cracks; 15 percent fine mica flakes; 5 percent gravel; moderately acid (pH 5.6).

## ***Bouldercreek Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, broad ridges

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 15 to 90 percent

*Elevation:* 1,600 to 5,200 feet

*Mean annual precipitation:* 30 to 60 inches

*Mean annual air temperature:* 38 to 45 degrees F

*Frost-free period:* 50 to 125 days

*Taxonomic class:* Ashy over loamy-skeletal, amorphous over isotic, frigid Typic Udivitrands

### ***Typical Pedon***

Bouldercreek ashy loam in an area of Bouldercreek-Brodeer complex, 35 to 70 percent slopes, about 11 miles north and 2 miles east of Headquarters, Idaho; about 350 feet south and 550 feet west of the northeast corner of section 25, T. 40 N., R. 5 E.; latitude 46 degrees, 47 minutes, 17 seconds north and longitude 115 degrees, 45 minutes, 56 seconds west; U.S. Geological Survey Berthahill Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 8 inches; yellowish brown (10YR 5/4) ashy loam, dark yellowish brown (10YR 3/4) moist; weak very fine and fine granular structure; very soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; 1 percent rounded fine iron-manganese concretions; 10 percent gravel; slightly acid (pH 6.2); clear smooth boundary.

Bw1—8 to 21 inches; light yellowish brown (10YR 6/4) ashy loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; 2 percent rounded fine iron-manganese concretions; 10 percent gravel; moderately acid (pH 6.0); abrupt irregular boundary.

2Bw2—21 to 27 inches; light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/4) gravelly loam, brown (10YR 4/3) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium roots throughout and few coarse roots between peds; common very fine and fine irregular and tubular pores; few patchy faint brown (10YR 4/3) clay films in root channels and pores; 1 percent fine mica flakes; 20 percent gravel and 10 percent cobbles; very strongly acid (pH 5.0); clear wavy boundary.

2Bw3—27 to 34 inches; light yellowish brown (2.5Y 6/4) very gravelly sandy loam, olive brown (2.5Y 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots between peds; common very fine and fine tubular pores; 2 percent fine mica flakes; 40 percent gravel and 15 percent cobbles; very strongly acid (pH 4.8); clear wavy boundary.

2BC—34 to 53 inches; light yellowish brown (2.5Y 6/4) very cobbly coarse sandy loam, olive brown (2.5Y 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots between peds; common very fine irregular and tubular pores; 1 percent fine mica flakes;



## Soil Survey of Clearwater Area, Idaho

20 percent gravel, 25 percent cobbles, and 10 percent stones; very strongly acid (pH 4.7); gradual smooth boundary.  
2C—53 to 69 inches; light yellowish brown (2.5Y 6/4) very gravelly loamy sand, olive brown (2.5Y 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots throughout; few very fine irregular pores; 1 percent fine mica flakes; 30 percent gravel and 20 percent cobbles; very strongly acid (pH 4.7).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 26 inches

### ***Brequito Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges, structural benches

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or gneiss

*Slope range:* 5 to 75 percent

*Elevation:* 1,600 to 4,100 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Andic Hapludalfs

### ***Typical Pedon***

Brequito ashy silt loam in an area of Brequito-Lado complex, 5 to 15 percent slopes, about 4 miles east of Weippe, Idaho; about 400 feet north and 1,600 feet east of the southwest corner of section 9, T. 35 N., R. 5 E.; latitude 46 degrees, 23 minutes, 3 seconds north and longitude 115 degrees, 50 minutes, 27 seconds west; U.S. Geological Survey Pierce Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 3 inches; moderately decomposed plant material.

A—3 to 5 inches; dark grayish brown (10YR 4/2) ashy silt loam, dark brown (7.5YR 3/3) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine irregular pores; 1 percent fine rounded iron-manganese concretions; neutral (pH 6.7); abrupt wavy boundary.

Bw—5 to 11 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine irregular pores; 3 percent fine rounded iron-manganese concretions; neutral (pH 6.7); abrupt wavy boundary.

2B/E1—11 to 15 inches; B part is yellowish brown (10YR 5/4) silt loam, brown (10YR 4/3) moist, and E part is pale brown (10YR 6/3) silt loam, yellowish brown (10YR 5/4) moist; moderate medium to coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; many very fine and fine and few coarse roots; common very fine and fine irregular pores and few very fine and fine tubular pores; common faint clay films on faces of peds; common distinct skeletalans on faces of peds and in pores; 1 percent fine charcoal; 3-inch-wide krotovina filled with volcanic ash; 1 percent fine mica flakes; neutral (pH 6.8); clear wavy boundary.

2B/E2—15 to 20 inches; B part is light yellowish brown (10YR 6/4) silt loam, brown (10YR 5/3) moist, and E part is very pale brown (10YR 7/4) silt loam, yellowish

brown (10YR 5/4) moist; weak medium and coarse prismatic structure parting to moderate fine and medium subangular blocky; hard, firm, slightly sticky and slightly plastic; common fine and medium roots throughout and common coarse roots along faces of peds; common very fine and fine irregular and tubular pores; common faint clay films on faces of peds; common distinct skeletons on faces of peds and in pores; 1 percent fine mica flakes; slightly acid (pH 6.3); gradual wavy boundary.

2Bt1—20 to 28 inches; light yellowish brown (10YR 6/4) silty clay loam, yellowish brown (10YR 5/4) moist; weak very coarse prismatic structure parting to moderate medium and coarse subangular blocky; very hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots along faces of peds and few very fine and fine roots in interior of peds; common very fine and fine irregular and tubular pores; common distinct clay films on faces of peds and in pores; 1 percent fine mica flakes; slightly acid (pH 6.1); gradual smooth boundary.

2Bt2—28 to 37 inches; very pale brown (10YR 7/4) silty clay loam, yellowish brown (10YR 5/4) moist; moderate very coarse prismatic structure parting to medium and coarse subangular blocky; very hard, firm, moderately sticky and moderately plastic; common fine and medium roots along faces of peds and few very fine roots in interior of peds; few very fine and fine irregular and tubular pores; many distinct clay films on faces of peds and in pores; 2 percent fine mica flakes; 2 percent gravel; moderately acid (pH 5.6); clear irregular boundary.

2Bt3—37 to 48 inches; very pale brown (10YR 7/4) loam, yellowish brown (10YR 5/4) moist; weak very coarse prismatic structure parting to moderate medium and coarse subangular blocky; very hard, firm, moderately sticky and moderately plastic; common very fine and fine roots along faces of peds; common very fine and fine irregular and tubular pores; common distinct clay films on faces of peds; 2 percent fine mica flakes; 2 percent gravel; moderately acid (pH 5.6); clear smooth boundary.

3BC—48 to 62 inches; very pale brown (10YR 8/4) loam, light yellowish brown (10YR 6/4) moist; weak very coarse prismatic structure parting to moderate medium and coarse subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and fine irregular pores and few very fine tubular pores; dark yellowish brown (10YR 4/4) loam lamellae that are 0.5 to 1 inch thick and 2 to 3 inches apart and have common distinct clay films; 5 percent fine mica flakes; 5 percent gravel; strongly acid (pH 5.4); clear smooth boundary.

3C—62 to 67 inches; yellow (10YR 8/6) loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, friable; few very fine roots; common very fine and fine irregular pores; strong brown (7.5YR 4/6) loam lamellae that are 0.13 to 0.25 inch thick and are in horizontal and vertical cracks; 5 percent gravel; strongly acid (pH 5.3).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 7 to 13 inches

### ***Brodeer Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

## Soil Survey of Clearwater Area, Idaho

*Slope range:* 10 to 75 percent

*Elevation:* 1,600 to 5,200 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands

### **Typical Pedon**

Brodeer ashy silt loam in an area of Brodeer-Mushel complex, 35 to 75 percent slopes, about 1 mile south and 7 miles east of Weippe, Idaho; about 2,300 feet south and 850 feet east of the northwest corner of section 24, T. 35 N., R. 5 E.; latitude 46 degrees, 21 minutes, 44 seconds north and longitude 115 degrees, 46 minutes, 53 seconds west; U.S. Geological Survey Browns Creek Ridge Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 4 inches; brown (10YR 5/3) ashy silt loam, dark brown (7.5YR 3/3) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine irregular pores; moderately acid (pH 6.0); gradual smooth boundary.

Bw1—4 to 9 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine granular structure; soft, friable, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine irregular pores; slightly acid (pH 6.1); gradual smooth boundary.

Bw2—9 to 21 inches; light yellowish brown (10YR 6/4) ashy silt loam, brown (7.5YR 4/4) moist; weak very fine and fine granular structure; soft, friable, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine irregular pores; slightly acid (pH 6.3); abrupt wavy boundary.

2Bt1—21 to 32 inches; light yellowish brown (10YR 6/4) loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure parting to weak very fine and fine granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine irregular pores and few fine tubular pores; few faint clay films in root channels and pores; three 2-inch-wide krotovinas filled with volcanic ash; 5 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

2Bt2—32 to 39 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure parting to fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots along faces of peds and few very fine roots in interior of peds; common very fine and fine irregular pores and common medium tubular pores; few faint patchy clay films in root channels; few dark brown (10YR 4/3) areas of clay enrichment; 5 percent gravel; moderately acid (pH 5.9); clear smooth boundary.

2Bt3—39 to 49 inches; very pale brown (10YR 7/4) loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure parting to fine and medium subangular blocky; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots along faces of peds and few very fine roots in interior of peds; common very fine and fine irregular and tubular pores and few medium tubular pores; few faint patchy clay films in root channels; yellowish brown (10YR 5/4) loam lamellae that are 0.5 to 1.0 inch thick and 5 inches apart and have common distinct clay films; 10 percent fine mica flakes; 10 percent gravel; strongly acid (pH 5.4); clear smooth boundary.

- 2Bt4—49 to 59 inches; very pale brown (10YR 7/4) gravelly loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure parting to moderate fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots along faces of peds; common very fine irregular and tubular pores; few faint patchy clay films in root channels; yellowish brown (10YR 5/4) loam lamellae that are 0.5 to 1.0 inch thick and 5 inches apart and have common distinct clay films; 15 percent fine mica flakes; 15 percent gravel; strongly acid (pH 5.2); gradual smooth boundary.
- 2BC—59 to 67 inches; very pale brown (10YR 7/4) gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure parting to moderate fine and medium subangular blocky; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots along faces of peds; common very fine irregular and tubular pores; yellowish brown (10YR 5/4) loam lamellae that are 0.25 to 0.50 inch thick and 5 inches apart and have few distinct clay films; 15 percent fine mica flakes; 15 percent gravel; strongly acid (pH 5.1).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 19 inches

### ***Burntcreek Series***

*Depth class:* Very deep

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains, plateaus

*Landform:* Drainageways, flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Elevation:* 3,000 to 3,350 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, mixed, active, frigid Vitrandic Hapludolls

### ***Typical Pedon***

Burntcreek ashy loam in an area of Lewhand-Burntcreek complex, 0 to 2 percent slopes, about 1.5 miles south and 0.5 mile east of Weippe, Idaho; about 500 feet south and 2,100 feet east of the northwest corner of section 26, T. 35 N., R. 4 E.; latitude 46 degrees, 21 minutes, 9 seconds north and longitude 115 degrees, 55 minutes, 27 seconds west; U.S. Geological Survey Weippe South Quadrangle.

- Ap1—0 to 7 inches; brown (10YR 4/3) ashy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine and common fine irregular pores; moderately acid (pH 5.8); clear smooth boundary.
- Ap2—7 to 11 inches; brown (10YR 4/3) loam, very dark grayish brown (10YR 3/2) moist; moderate very fine, fine, and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine and few fine irregular pores and many very fine tubular pores; moderately acid (pH 5.8); clear wavy boundary.
- Bw1—11 to 21 inches; brown (7.5YR 4/4) loam, dark brown (7.5YR 3/4) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard,

friable, slightly sticky and slightly plastic; common very fine roots; many very fine, common fine and medium, and few coarse tubular pores; 5 percent krotovinas; strongly acid (pH 5.5); gradual wavy boundary.

Bw2—21 to 28 inches; yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 3/4) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine, common fine and medium, and few coarse tubular pores; few patchy distinct skeletons in pores; few fine faint masses of iron accumulation that are brown (7.5YR 4/4) moist; 1 percent fine gravel; moderately acid (pH 5.7); clear smooth boundary.

Bw3—28 to 36 inches; yellowish brown (10YR 5/4) loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and common fine tubular pores and common very fine irregular pores; few fine faint masses of iron accumulation that are dark brown (7.5YR 3/3) moist; 1 percent fine gravel; moderately acid (pH 5.8); clear smooth boundary.

C1—36 to 48 inches; yellowish brown (10YR 5/4), stratified very gravelly loam to silt loam, brown (7.5YR 4/4) moist; lenses of gravel between strata that have weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine, common fine, and few medium irregular pores; common medium distinct masses of iron accumulation that are strong brown (7.5YR 4/6) moist; 5 to 45 percent gravel; slightly acid (pH 6.3); abrupt wavy boundary.

C2—48 to 60 inches; brown (7.5YR 5/4), stratified silt loam to fine sandy loam, dark brown (7.5YR 4/4) moist; weak very coarse prismatic structure; hard, friable, slightly sticky and slightly plastic; common very fine irregular pores and few very fine tubular pores; many fine and medium distinct masses of iron accumulation that are dark brown (7.5YR 3/4) moist and few fine prominent iron depletions that are olive gray (5Y 5/2) moist; 5 percent gravel; moderately acid (pH 6.0).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 11 to 18 inches

*Depth to seasonal high apparent water table:* 7 to 19 inches in February and March

*Flooding:* Occasional, brief periods in December through March

## ***Campra Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, hillslopes

*Parent material:* Volcanic ash and loess over colluvium derived from basalt

*Slope range:* 10 to 75 percent

*Elevation:* 1,200 to 3,000 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Vitrandic Hapludalfs

### ***Typical Pedon***

Campra gravelly ashy silt loam in an area of Campra-Sly complex, 10 to 35 percent slopes, about 3.4 miles east and 1.1 miles south of Orofino, Idaho; about 1,450 feet south and 1,750 feet east of the northwest corner of section 14, T. 36 N., R. 2 E.;



Soil Survey of Clearwater Area, Idaho

latitude 46 degrees, 28 minutes, 0 seconds north and longitude 116 degrees, 10 minutes, 22 seconds west; U.S. Geological Survey Orofino East Quadrangle.

Oi—0 to 3 inches; slightly decomposed plant material.

A—3 to 7 inches; brown (10YR 4/3) gravelly ashy silt loam, dark brown (10YR 3/3) moist; moderate very fine and fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; 25 percent gravel; neutral (pH 7.3); clear wavy boundary.

AB—7 to 14 inches; brown (10YR 5/3) very gravelly ashy silt loam, brown (10YR 4/3) moist; weak very fine and fine granular structure and weak fine and medium subangular blocky; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots throughout; many very fine and fine irregular pores; 30 percent gravel and 10 percent cobbles; neutral (pH 7.2); clear wavy boundary.

E/B—14 to 20 inches; 75 percent E part that is pale brown (10YR 6/3) very gravelly silt loam, dark brown (10YR 4/3) moist, and 25 percent B part that is brown (10YR 5/3) very gravelly silt loam, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots between faces of peds; common very fine and fine irregular pores and few very fine tubular pores; few patchy faint clay films in pores; 40 percent gravel and 15 percent cobbles; neutral (pH 6.8); abrupt wavy boundary.

B/E1—20 to 33 inches; 75 percent B part that is yellowish brown (10YR 5/4) extremely cobbly silt loam, dark yellowish brown (10YR 3/4) moist, and 25 percent E part that is pale brown (10YR 6/3) extremely cobbly silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine roots along faces of peds; common very fine and fine irregular pores and few very fine tubular pores; few patchy faint clay films on faces of peds; 15 percent gravel, 50 percent cobbles, and 10 percent stones; neutral (pH 6.6); abrupt wavy boundary.

B/E2—33 to 49 inches; 85 percent B part that is dark yellowish brown (10YR 4/6) extremely gravelly silt loam, dark yellowish brown (10YR 4/4) moist, and 15 percent E part that is pale brown (10YR 6/3) extremely gravelly silt loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine roots along faces of peds; common very fine and fine irregular pores and few very fine tubular pores; common discontinuous prominent pale brown (10YR 6/3) skeletons on faces of peds and in pores and common discontinuous distinct strong brown (7.5YR 4/6) clay films on faces of peds; 1 percent fine mica flakes; 70 percent gravel and 5 percent cobbles; slightly acid (pH 6.5); clear wavy boundary.

B/E3—49 to 61 inches; 85 percent B part that is brown (10YR 4/3) extremely gravelly silt loam, dark brown (10YR 3/3) moist, and 15 percent E part that is pale brown (10YR 6/3) extremely gravelly silt loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; few very fine roots along faces of peds; common very fine and fine tubular pores and few very fine irregular pores; common discontinuous distinct light yellowish brown (10YR 6/4) clay films on rock fragments; 1 percent fine mica flakes; 60 percent gravel and 5 percent cobbles; slightly acid (pH 6.1); abrupt wavy boundary.

B/E4—61 to 67 inches; 85 percent B part that is brown (10YR 4/3) very gravelly clay loam, dark brown (10YR 3/3) moist, and 15 percent E part that is pale brown (10YR 6/3) very gravelly clay loam, brown (10YR 4/3) moist; strong medium and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few fine and medium roots along faces of peds; few very fine tubular pores;



common discontinuous prominent white (10YR 8/2) skeletal in root channels and pores and many continuous prominent brown (10YR 4/3) clay films on faces of peds and in pores; 1 percent fine mica flakes; 35 percent gravel; moderately acid (pH 6.0).

## **Carlinton Series**

*Depth class:* Moderately deep to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Plateaus

*Landform:* Hillslopes, interfluvies on hillslopes

*Parent material:* Loess and/or reworked loess

*Slope range:* 3 to 30 percent

*Elevation:* 1,200 to 3,800 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Vitrandic Fragixeralfs

### **Typical Pedon**

Carlinton ashy silt loam ([fig. 14](#)) in an area of Carlinton-Kruse complex, 5 to 20 percent slopes, about 4 miles north and 5 miles west of Orofino, Idaho; about 2,250 feet north and 300 feet west of the southeast corner of section 20, T. 37 N., R. 1 E.; latitude 46 degrees, 32 minutes, 9 seconds north and longitude 116 degrees, 20 minutes, 52 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 8 inches; dark grayish brown (10YR 4/2) ashy silt loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine interstitial pores; neutral (pH 7.0); clear wavy boundary.

AB—8 to 11 inches; brown (10YR 5/3) ashy silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine and common fine tubular pores; neutral (pH 6.8); gradual wavy boundary.

Bw—11 to 22 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and many fine, medium, and coarse roots; many very fine and fine tubular pores; slightly acid (pH 6.4); clear wavy boundary.

B/E—22 to 35 inches; B part is light yellowish brown (10YR 6/4) silt loam, strong brown (7.5YR 4/6) moist, and E part is light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; weak fine prismatic structure parting to moderate fine subangular blocky; hard, firm, slightly sticky and slightly plastic; many very fine, fine, and medium roots; many very fine and fine tubular pores; few distinct clay films lining pores and on faces of peds in B material; about 60 percent of horizon is B material and 40 percent is E material, which is uncoated silt grains; few fine distinct strong brown (7.5YR 5/8) masses of iron accumulation in E material; few rounded iron and manganese concretions less than 2 millimeters in size; moderately acid (pH 5.8); abrupt wavy boundary.



Figure 14.—Typical profile of a Carlinton soil. The ochric epipedon extends from the surface of the mineral soil material to a depth of 11 inches (A and AB horizons). The argillic horizon is between depths of 22 and 62 inches (B/E and Btxb horizons). The fragipan is between depths of 35 and 62 inches (Btxb horizon). The particle-size control section is between depths of 22 and 35 inches (B/E horizon).

Btxb1—35 to 55 inches; light yellowish brown (10YR 6/4) silty clay loam, strong brown (7.5YR 5/6) moist; strong medium and coarse prismatic structure; very hard, very firm and brittle, moderately sticky and moderately plastic; few very fine, fine, and medium flattened roots on faces of peds; many very fine and fine tubular pores; many distinct and common prominent clay films lining pores and on faces of peds; dark organic stains on faces of peds; common iron-manganese concretions 2 to 3

millimeters in size; speckling of uncoated silt grains in matrix of peds; moderately acid (pH 5.8); gradual wavy boundary.

Bt<sub>2</sub>—55 to 62 inches; light yellowish brown (10YR 6/4) silty clay loam, dark yellowish brown (10YR 4/6) moist; moderate coarse and very coarse prismatic structure; very hard, very firm and brittle, moderately sticky and moderately plastic; few very fine and fine flattened roots on faces of peds; many very fine and fine tubular pores; many distinct and common prominent clay films lining pores and on faces of peds; some organic stains on faces of peds; speckling of uncoated silt grains in matrix of peds; few iron-manganese concretions more than 2 millimeters in size; moderately acid (pH 6.0).

### ***Range in Characteristics***

*Depth to seasonal high perched water table:* 4 to 7 inches in January and February

*Depth to the fragipan:* 22 to 40 inches

## ***Caseycreek Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (K<sub>sat</sub>):* Moderately high

*Landscape:* Mountains

*Landform:* Terraces

*Parent material:* Volcanic ash and alluvium

*Slope range:* 2 to 15 percent

*Elevation:* 1,700 to 3,300 feet

*Mean annual precipitation:* 32 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, frigid Vitrandic Eutrudepts

### ***Typical Pedon***

Caseycreek ashy silt loam, 2 to 15 percent slopes; Latah County, Idaho; about 2 miles east and 5 miles south of Helmer, Idaho; about 1,400 feet north and 1,200 feet east of the southwest corner of section 10, T. 39 N., R. 1 W.; latitude 46 degrees, 44 minutes, 4 seconds north and longitude 116 degrees, 28 minutes, 8 seconds west; U.S. Geological Survey Park Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 4 inches; light brownish gray (10YR 6/2) ashy silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to weak very fine and fine granular; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots throughout; few very fine and fine tubular pores; 15 percent fine mica flakes; slightly acid (pH 6.5); abrupt smooth boundary.

AB—4 to 7 inches; pale brown (10YR 6/3) ashy loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine roots on faces of peds and common medium and coarse roots throughout; few very fine and fine tubular pores; 20 percent fine mica flakes; moderately acid (pH 5.7); clear smooth boundary.

Bw<sub>1</sub>—7 to 16 inches; light yellowish brown (10YR 6/4) loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; moderately hard, friable, nonsticky and slightly plastic; many very fine and fine roots on faces of peds and common medium and coarse roots throughout; few very fine and fine

- tubular pores; 2 percent faint skeletal on faces of peds; 20 percent fine mica flakes; strongly acid (pH 5.1); clear smooth boundary.
- Bw2—16 to 22 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; moderately hard, friable, nonsticky and nonplastic; many very fine and fine roots on faces of peds and common medium and coarse roots throughout; few very fine tubular pores; 2 percent faint skeletal on faces of peds; 20 percent fine mica flakes; very strongly acid (pH 5.0); abrupt wavy boundary.
- C1—22 to 34 inches; light yellowish brown (10YR 6/4) coarse sandy loam, yellowish brown (10YR 5/4) moist; massive; loose, nonsticky and nonplastic; common very fine and fine roots throughout; many very fine interstitial pores; 8 percent fine mica flakes; strongly acid (pH 5.2); abrupt smooth boundary.
- C2—34 to 48 inches; 80 percent very pale brown (10YR 7/4) sandy loam, dark yellowish brown (10YR 4/4) moist, and 20 percent pale brown (10YR 6/3) coarse sandy loam, brown (10YR 5/3) moist; massive; moderately hard, very friable, nonsticky and nonplastic; common very fine and fine roots throughout; many very fine interstitial pores; 2 percent fine mica flakes; strongly acid (pH 5.2); gradual smooth boundary.
- C3—48 to 54 inches; light yellowish brown (10YR 6/4) coarse sand, dark yellowish brown (10YR 4/6) moist; massive; slightly hard, loose, nonsticky and nonplastic; few very fine and fine roots throughout; many very fine interstitial pores; 2 percent fine mica flakes; strongly acid (pH 5.3); gradual smooth boundary.
- C4—54 to 66 inches; 90 percent light yellowish brown (10YR 6/4) coarse sand, brown (10YR 5/3) moist, and 10 percent light gray (10YR 7/2) loamy sand, brown (10YR 4/3) moist; massive; moderately hard, very friable, nonsticky and nonplastic; many very fine interstitial pores; 2 percent fine mica flakes; strongly acid (pH 5.3).

### ***Range in Characteristics***

*Depth to seasonal high apparent water table:* 15 to 35 inches in December through April

## ***Cavendish Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Hillslopes, ridges

*Parent material:* Loess over residuum derived from basalt

*Slope range:* 2 to 20 percent

*Elevation:* 2,000 to 3,500 feet

*Mean annual precipitation:* 24 to 33 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Ultic Haploxeralfs

### ***Typical Pedon***

Cavendish silt loam in an area of Cavendish-Taney complex, 8 to 20 percent slopes, about 1 mile south of Teakean, Idaho; about 450 feet north and 1,500 feet west of the southeast corner of section 19, T. 37 N., R. 1 E.; latitude 46 degrees, 31 minutes, 51 seconds north and longitude 116 degrees, 22 minutes, 22 seconds west; U.S. Geological Survey Ahsahka quadrangle.

Ap1—0 to 5 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure parting to weak fine granular; slightly hard, friable,



slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine irregular pores; 5 percent gravel; moderately acid (pH 5.8); abrupt smooth boundary.

Ap2—5 to 8 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores and few fine tubular pores; 5 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

Bt1—8 to 15 inches; reddish brown (5YR 5/4) silty clay loam, reddish brown (5YR 4/4) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common fine roots; common fine irregular and tubular pores; 5 percent gravel; many faint clay films lining pores and on faces of peds; slightly acid (pH 6.4); gradual wavy boundary.

Bt2—15 to 30 inches; yellowish red (5YR 5/6) silty clay loam, reddish brown (5YR 4/4) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, friable, moderately sticky and moderately plastic; few fine roots; many very fine and fine irregular pores and common fine tubular pores; 10 percent gravel; many faint clay films lining pores and on faces of peds; neutral (pH 6.6); gradual wavy boundary.

2Bt3—30 to 43 inches; yellowish red (5YR 5/6) gravelly clay loam, yellowish red (5YR 4/6) moist; moderate medium and coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few fine roots; many very fine and fine irregular and tubular pores; 30 percent gravel; continuous faint clay films lining pores and on faces of peds; neutral (pH 6.8); clear wavy boundary.

2Cr—43 inches; decomposed basalt.

### ***Range in Characteristics***

*Depth to weathered basalt:* 40 to 60 inches

## ***Cobbler Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Volcanic ash over colluvium derived from metamorphic rock

*Slope range:* 35 to 75 percent

*Elevation:* 1,600 to 3,000 feet

*Mean annual precipitation:* 25 to 40 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Coarse-loamy, isotic, frigid Vitrandic Haploxerepts

### ***Typical Pedon***

Cobbler ashy loam in an area of Cobbler-Aldermant complex, 35 to 75 percent slopes, about 11 miles northeast of Orofino, Idaho; about 300 feet south and 1,150 feet west of the northeast corner of section 22, T. 38 N., R. 3 E.; latitude 46 degrees, 37 minutes, 44 seconds north and longitude 116 degrees, 3 minutes, 21 seconds west; U.S. Geological Survey Little Green Mountain Quadrangle.

Oi—0 to 3 inches; slightly decomposed plant material.

Oe—3 to 4 inches; moderately decomposed plant material.

A—4 to 7 inches; brown (10YR 5/3) ashy loam, dark brown (10YR 3/3) moist; weak fine and medium granular structure; soft, friable, nonsticky and nonplastic; many

## Soil Survey of Clearwater Area, Idaho

very fine and fine roots; many very fine and fine irregular pores; 5 percent fine mica flakes; 10 percent very fine iron-manganese concretions; slightly acid (pH 6.5); clear smooth boundary.

AB—7 to 16 inches; yellowish brown (10YR 5/4) ashy loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; soft, friable, nonsticky and nonplastic; many fine and medium roots; many very fine and fine irregular pores; 10 percent fine mica flakes; 5 percent gravel; 1 percent very fine iron-manganese concretions; slightly acid (pH 6.4); clear smooth boundary.

Bw1—16 to 26 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, brown (10YR 4/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine to coarse roots; common very fine and fine irregular pores; 15 percent fine mica flakes; 25 percent gravel; moderately acid (pH 5.9); abrupt wavy boundary.

Bw2—26 to 39 inches; brown (10YR 5/3) coarse sandy loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; common fine and medium and few coarse roots; common very fine and fine irregular pores; 10 percent fine mica flakes; 10 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

Bw3—39 to 50 inches; pale brown (10YR 6/3) coarse sandy loam, yellowish brown (10YR 5/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium and few coarse roots; common very fine irregular pores; 15 percent fine mica flakes; 10 percent gravel; slightly acid (pH 6.1); clear wavy boundary.

C1—50 to 59 inches; light yellowish brown (10YR 6/4) sandy loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine irregular pores; 20 percent fine mica flakes; 10 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

C2—59 to 68 inches; light yellowish brown (10YR 6/4) loamy sand, yellowish brown (10YR 5/4) moist; massive; few very fine roots; few very fine irregular pores; 20 percent fine mica flakes; 10 percent gravel; moderately acid (pH 5.7).

### ***Cranberry Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 5 to 45 percent

*Elevation:* 2,500 to 3,400 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands

### ***Typical Pedon***

Cranberry ashy silt loam in an area of Riswold-Cranberry complex, 5 to 20 percent slopes, about 7 miles northwest of Headquarters, Idaho; about 1,400 feet north and 2,650 feet west of the southeast corner of section 1, T. 38 N., R. 2 E.; latitude



## Soil Survey of Clearwater Area, Idaho

46 degrees, 39 minutes, 48 seconds north and longitude 115 degrees, 8 minutes, 30 seconds west; U.S. Geological Survey John Lewis Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 5 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine and medium roots throughout; many fine and very fine irregular pores; 1 percent fine rounded iron-manganese concretions; moderately acid (pH 6.0); clear wavy boundary.

Bw1—5 to 11 inches; light yellowish brown (10YR 6/4) ashy silt loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine and medium roots throughout; many very fine and fine irregular pores; 1 percent fine rounded iron-manganese concretions; slightly acid (pH 6.2); clear wavy boundary.

Bw2—11 to 16 inches; light yellowish brown (10YR 6/4) ashy silt loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots throughout; many very fine and fine irregular pores; 1 percent fine rounded iron-manganese concretions; slightly acid (pH 6.5); clear irregular boundary.

2Bt1—16 to 22 inches; light yellowish brown (10YR 6/4) silt loam, brown (7.5YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine roots throughout; many very fine and fine and common medium irregular and tubular pores; common prominent clay films that are dark yellowish brown (10YR 3/4) moist and on faces of peds; slightly acid (pH 6.5); clear wavy boundary.

2Bt2—22 to 32 inches; light brown (7.5YR 6/3) silt loam, brown (7.5YR 5/4) moist; moderate fine and medium subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; common very fine and fine roots throughout; common very fine, fine, and medium irregular and tubular pores; common distinct clay films on faces of peds; slightly acid (pH 6.5); clear wavy boundary.

2Bt3—32 to 40 inches; light yellowish brown (10YR 6/4) silty clay loam, brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, very firm, very sticky and very plastic; common very fine and fine roots throughout; common very fine and fine and few medium irregular and tubular pores; common distinct clay films on faces of peds; slightly acid (pH 6.4); clear wavy boundary.

2Bt4—40 to 50 inches; very pale brown (10YR 7/4) silty clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common fine and very fine roots throughout; common fine and very fine irregular pores; common faint clay films on faces of peds; slightly acid (pH 6.2); clear wavy boundary.

3Btb1—50 to 57 inches; very pale brown (10YR 7/4) clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common fine and very fine roots throughout; common fine and very fine irregular pores; few faint clay films on faces of peds; moderately acid (pH 6.0); clear wavy boundary.

3Btb2—57 to 62 inches; very pale brown (10YR 7/4) clay loam, yellowish brown (10YR 5/4) moist; moderate medium subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; common fine and very fine irregular pores; few faint clay films on faces of peds; 2 percent gravel; moderately acid (pH 5.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 18 inches

## ***Crumarine Taxadjunct***

*Depth class:* Very deep

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Narrow flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Elevation:* 1,100 to 3,100 feet

*Mean annual precipitation:* 23 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Coarse-loamy, mixed, active, frigid Aquic Dystrochrepts

### ***Typical Pedon***

Crumarine silt loam, 0 to 3 percent slopes, about 7 miles north and 6 miles west of Ahsahka, Idaho; about 1,400 feet south and 200 feet west of the northeast corner of section 27, T. 38 N., R. 1 W.; latitude 46 degrees, 36 minutes, 40 seconds north and longitude 115 degrees, 26 minutes, 10 seconds west; U.S. Geological Survey Southwick Quadrangle.

- A—0 to 3 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 4/3) moist; common fine and medium faint redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist; weak fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, and medium roots; many very fine and fine interstitial pores; moderately acid (pH 6.0); clear smooth boundary.
- Bw—3 to 8 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; common fine and medium distinct redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many fine tubular pores; slightly acid (pH 6.2); clear wavy boundary.
- BC—8 to 13 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; common fine and medium distinct redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common fine roots; many very fine and fine interstitial pores; lenses of silt in horizon; slightly acid (pH 6.3); gradual wavy boundary.
- C1—13 to 24 inches; yellowish brown (10YR 5/4) sandy loam, brown (10YR 4/3) moist; many fine and medium prominent redoximorphic concentrations that are reddish brown (5YR 4/4) moist; many medium redoximorphic depletions that are brown (7.5YR 4/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine roots; many fine interstitial pores; many mica flakes in matrix; moderately acid (pH 6.0); gradual wavy boundary.
- C2—24 to 38 inches; very pale brown (10YR 7/3) sandy loam, dark yellowish brown (10YR 4/4) moist; many fine and medium redoximorphic concentrations that are yellowish red (5YR 5/8) moist; many medium redoximorphic depletions that are dark grayish brown (10YR 4/2) moist; massive; hard, friable, nonsticky and nonplastic; common very fine roots; many fine interstitial pores; many mica flakes in matrix; moderately acid (pH 6.0); clear wavy boundary.
- C3—38 to 44 inches; pale brown (10YR 6/3) sandy loam, dark yellowish brown (10YR 4/4) moist; many fine and medium prominent redoximorphic concentrations that are yellowish red (5YR 4/6) moist; many medium redoximorphic depletions that are dark grayish brown (10YR 4/2) moist; massive; hard, friable, nonsticky and

## Soil Survey of Clearwater Area, Idaho

nonplastic; few fine roots; many fine interstitial pores; many mica flakes in matrix; 10 percent gravel; moderately acid (pH 6.0); gradual wavy boundary.  
C4—44 to 60 inches; brown (10YR 5/3) gravelly sand, yellowish brown (10YR 5/4) moist; many medium strong redoximorphic concentrations that are brown (7.5YR 4/6) moist; many medium redoximorphic depletions that are dark grayish brown (10YR 4/2) moist; single grain; loose; many fine interstitial pores; many mica flakes in matrix; 25 percent gravel; moderately acid (pH 6.0).

### ***Range in Characteristics***

*Depth to seasonal high apparent water table:* 6 to 24 inches in January through May  
*Flooding:* Rare, brief periods in January through May

### ***Taxadjunct Features***

The Crumarine soils, as mapped in this survey area, are a taxadjunct to the Crumarine series. The Bw and BC horizons of these soils are thicker than is typical for the series. These differences, however, do not affect use and management.

## ***Dowper Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Volcanic ash over residuum derived from basalt

*Slope range:* 15 to 40 percent

*Elevation:* 3,000 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over isotic, frigid Alfic Udivitrands

### ***Typical Pedon***

Dowper ashy loam in an area of Placer-Dowper-Grangemont complex, 15 to 40 percent slopes, about 5 miles north and 4 miles east of Weippe, Idaho; about 450 feet south and 2,100 feet east of the northwest corner of section 19, T. 36 N., R. 4 E.; latitude 46 degrees, 27 minutes, 16 seconds north and longitude 116 degrees, 0 minutes, 20 seconds west; U.S. Geological Survey Rudo Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

Oe—2 to 4 inches; moderately decomposed plant material.

A—4 to 6 inches; yellowish brown (10YR 5/4) ashy loam, dark brown (7.5YR 3/3) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, slightly sticky and nonplastic; many very fine and fine and common medium and coarse roots; many very fine and fine and common medium irregular pores; slightly acid (pH 6.4); abrupt smooth boundary.

Bw1—6 to 14 inches; strong brown (7.5YR 5/6) ashy loam, dark brown (7.5YR 3/4) moist; weak very fine and fine subangular blocky structure parting to weak very fine granular; soft, very friable, slightly sticky and nonplastic; many very fine and fine, common medium, and few coarse roots; many very fine and fine and common medium irregular pores; 2 percent fine rounded iron-manganese concretions; slightly acid (pH 6.2); clear wavy boundary.

Bw2—14 to 21 inches; strong brown (7.5YR 5/6) ashy loam, dark brown (7.5YR 3/4) moist; weak very fine and fine subangular blocky structure parting to weak very

## Soil Survey of Clearwater Area, Idaho

fine granular; soft, very friable, slightly sticky and nonplastic; many very fine and fine and common medium roots; many very fine and common fine irregular pores and few very fine tubular pores; 2 percent fine rounded iron-manganese concretions; slightly acid (pH 6.2); abrupt wavy boundary.

2Bt1—21 to 32 inches; brown (7.5YR 5/3) loam, dark brown (7.5YR 3/3) moist; moderate medium and coarse subangular blocky structure parting to weak fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, common medium, and few coarse roots; common very fine and fine and few medium tubular pores; few faint clay films on faces of peds and lining pores; 5 percent krotovinas throughout; 5 percent paragravel; moderately acid (pH 6.0); clear wavy boundary.

2Bt2—32 to 52 inches; brown (10YR 5/3) loam, dark brown (7.5YR 3/3) moist; moderate medium and coarse subangular blocky structure parting to weak very fine and fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine and fine and few medium tubular pores; common faint clay films on faces of peds and lining pores; 5 percent paragravel; moderately acid (pH 5.8); gradual wavy boundary.

2Bt3—52 to 58 inches; brown (10YR 5/3) clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; few very fine, fine, and medium roots; common very fine and fine and few medium pores; many distinct clay films on faces of peds and lining pores; 10 percent paragravel; moderately acid (pH 5.8); gradual wavy boundary.

2Bt4—58 to 65 inches; brownish yellow (10YR 6/6) gravelly sandy clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine irregular and tubular pores; common distinct clay films on faces of peds; 5 percent paragravel and 15 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

2Cr—65 inches; highly fractured, decomposed basalt.

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 18 inches

### ***Driscoll Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands, plateaus

*Landform:* Hillslopes, structural benches

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 3 to 35 percent

*Elevation:* 1,100 to 3,200 feet

*Mean annual precipitation:* 24 to 28 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine, smectitic, mesic Ultic Palexerolls

### ***Typical Pedon***

Driscoll silt loam in an area of Driscoll-Larkin complex, 12 to 25 percent slopes, about 4 miles east of Ahsahka, Idaho; about 2,350 feet north and 2,100 feet east of the

## Soil Survey of Clearwater Area, Idaho

southwest corner of section 31, T. 37 N., R. 2 E.; latitude 46 degrees, 30 minutes, 25 seconds north and longitude 116 degrees, 15 minutes, 16 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

- A1—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 2/2) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; moderately hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots throughout; many very fine and fine irregular pores; moderately acid (pH 5.8); clear smooth boundary.
- A2—4 to 13 inches; dark brown (10YR 3/3) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to weak very fine and fine granular; very hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots throughout; many very fine and fine irregular pores; moderately acid (pH 5.8); abrupt wavy boundary.
- AB—13 to 18 inches; brown (10YR 4/3) silty clay loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; very hard, friable, slightly sticky and moderately plastic; many very fine roots throughout and common fine roots between peds; common very fine and fine irregular pores and common very fine tubular pores; moderately acid (pH 6.0); clear wavy boundary.
- Bt—18 to 20 inches; dark yellowish brown (10YR 4/4) silty clay loam, strong brown (7.5YR 4/6) moist; weak medium subangular blocky structure parting to moderate fine subangular blocky; very hard, friable, slightly sticky and plastic; many very fine roots between peds; common fine irregular pores and common very fine and fine tubular pores; many faint dark brown (10YR 3/3) clay films on faces of peds; many distinct very pale brown (10YR 7/3) skeletans on faces of peds; moderately acid (pH 6.0); abrupt wavy boundary.
- E—20 to 24 inches; light gray (10YR 7/2) silt loam, light yellowish brown (10YR 6/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; few very fine roots between peds; common fine irregular pores and common very fine and fine tubular pores; many rounded very fine and fine iron-manganese concretions; moderately acid (pH 5.8); abrupt wavy boundary.
- 2Btb1—24 to 43 inches; yellowish brown (10YR 5/4) silty clay, dark brown (7.5YR 3/4) moist; strong coarse prismatic structure parting to strong fine and medium subangular blocky; extremely hard, very firm, moderately sticky and very plastic; common very fine roots between peds; common very fine irregular pores and few very fine tubular pores; many distinct brown (10YR 4/3) clay films on faces of peds and in pores; few prominent light yellowish brown (10YR 6/4) skeletans on faces of peds; many rounded very fine and fine iron-manganese concretions; moderately acid (pH 5.8); gradual wavy boundary.
- 2Btb2—43 to 54 inches; yellowish brown (10YR 5/4) silty clay, brown (10YR 4/3) moist; strong coarse prismatic structure parting to strong fine and medium subangular blocky; extremely hard, very firm, moderately sticky and very plastic; few very fine roots between peds; few very fine irregular and tubular pores; common nonintersecting slickensides; many prominent dark brown (7.5YR 4/3) clay films on faces of peds and in pores; few prominent light yellowish brown (10YR 6/4) skeletans on faces of peds; many rounded fine and very fine iron-manganese concretions; 5 percent gravel; neutral (pH 7.2); gradual wavy boundary.
- 2Btkb—54 to 70 inches; brown (10YR 5/3) silty clay, brown (10YR 4/3) moist; strong coarse prismatic structure parting to strong fine and medium subangular blocky; extremely hard, very firm, moderately sticky and very plastic; few very fine roots between peds; few very fine irregular and tubular pores; common nonintersecting slickensides; many prominent dark brown (10YR 3/3) clay films on faces of peds and in pores; many rounded very fine and fine iron-manganese concretions;



## Soil Survey of Clearwater Area, Idaho

slightly effervescent; many prominent carbonate coatings on faces of peds;  
5 percent gravel and 1 percent cobbles; slightly alkaline (pH 7.6).

### **Range in Characteristics**

*Thickness of mollic epipedon:* 10 to 19 inches

*Depth to seasonal high perched water table:* 10 to 35 inches in February and March

### **Dullaxe Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 10 to 75 percent

*Elevation:* 2,000 to 5,000 feet

*Mean annual precipitation:* 35 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over isotic, frigid Typic Udivitrands

### **Typical Pedon**

Dullaxe ashy loam in an area of Dullaxe-Judgetown complex, 35 to 70 percent slopes, about 5 miles north and 5 miles east of Headquarters, Idaho; about 100 feet north and 2,300 feet east of the southwest corner of section 28, T. 39 N., R. 6 E.; latitude 46 degrees, 41 minutes, 17 seconds north and longitude 115 degrees, 42 minutes, 47 seconds west; U.S. Geological Survey Browns Rock Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 7 inches; brown (10YR 5/3) ashy loam, dark brown (10YR 3/3) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots throughout; many very fine and fine irregular pores and common fine and medium tubular pores; 5 percent fine mica flakes; 3 percent gravel; moderately acid (pH 5.6); clear wavy boundary.

Bw1—7 to 19 inches; yellowish brown (10YR 5/4) ashy loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots throughout; many very fine and fine irregular pores and common fine and medium tubular pores; 5 percent fine mica flakes; 3 percent gravel; moderately acid (pH 6.0); abrupt wavy boundary.

2Bw2—19 to 27 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine and medium roots throughout; many very fine and fine irregular pores and few fine and medium tubular pores; 15 percent fine mica flakes; 2 percent gravel and 1 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.

2Bw3—27 to 38 inches; light yellowish brown (10YR 6/4) sandy loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots throughout; many very fine and fine irregular pores and few fine tubular pores; 10 percent fine mica flakes; 2 percent gravel; moderately acid (pH 5.8); clear wavy boundary.



- 2BC—38 to 46 inches; 85 percent light yellowish brown (10YR 6/4) and 15 percent white (10YR 8/1) sandy loam, 85 percent yellowish brown (10YR 5/6) and 15 percent very pale brown (10YR 8/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and few fine roots throughout; common very fine and fine irregular pores and few very fine and fine tubular pores; 5 percent fine mica flakes; moderately acid (pH 5.8); clear wavy boundary.
- 2C1—46 to 57 inches; 50 percent light yellowish brown (10YR 6/4) and 50 percent white (10YR 8/1) sandy loam, 50 percent yellowish brown (10YR 5/6) and 50 percent pale brown (10YR 8/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots throughout; common very fine irregular pores and few very fine and fine tubular pores; 5 percent fine mica flakes; strongly acid (pH 5.5); abrupt wavy boundary.
- 2C2—57 to 66 inches; 50 percent very pale brown (10YR 7/3) and 50 percent white (10YR 8/1) loamy sand, 50 percent pale brown (10YR 6/3) and 50 percent very pale brown (10YR 8/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots throughout; common very fine irregular pores; 5 percent fine mica flakes; strongly acid (pH 5.4).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 25 inches

### ***Dworshak Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over loess over colluvium derived from metasedimentary rock

*Slope range:* 5 to 50 percent

*Elevation:* 1,600 to 4,800 feet

*Mean annual precipitation:* 30 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands

### ***Typical Pedon***

Dworshak ashy silt loam in an area of Dworshak-Brequito complex, 15 to 35 percent slopes, about 2.5 miles northeast of Cavendish, Idaho; about 2,300 feet north and 1,800 feet west of the southeast corner of section 31, T. 38 N., R. 1 E.; latitude 46 degrees, 35 minutes, 30 seconds north and longitude 116 degrees, 22 minutes, 40 seconds west; U.S. Geological Survey Southwick Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

Oe—2 to 3 inches; moderately decomposed plant material.

A—3 to 11 inches; yellowish brown (10YR 5/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure parting to weak fine granular; soft, very friable; nonsticky and nonplastic; many very fine, fine, medium, and coarse roots; many very fine irregular pores; slightly acid (pH 6.4); gradual smooth boundary.

- Bw—11 to 18 inches; yellowish brown (10YR 5/6) ashy silt loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and coarse roots; many very fine irregular pores; slightly acid (pH 6.2); abrupt wavy boundary.
- 2E/Bt—18 to 31 inches; E part is very pale brown (10YR 7/4) silt loam, brown (7.5YR 5/4) moist, and B part is light yellowish brown (10YR 6/4) clay loam, brown (7.5YR 4/4) moist; weak fine and medium prismatic structure parting to moderate fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine and many fine and medium roots; many very fine and fine irregular pores and few very fine tubular pores; few faint clay films lining pores and on faces of peds; 10 percent gravel; slightly acid (pH 6.2); clear wavy boundary.
- 3Bt/E—31 to 50 inches; B part is light brown (7.5YR 6/4) gravelly clay loam, dark brown (7.5YR 4/4) moist, and E part is very pale brown (10YR 7/4) gravelly silt loam, brown (7.5YR 5/4) moist; moderate fine and medium prismatic structure parting to moderate fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and many fine and medium roots; many very fine and fine irregular pores and few fine tubular pores; common faint distinct clay films lining pores and on faces of peds; tongues of very pale brown (10YR 7/4) material 1 to 2 inches wide and 3 inches apart; 20 percent gravel; moderately acid (pH 6.0); gradual wavy boundary.
- 3Bt—50 to 63 inches; reddish yellow (7.5YR 6/6) very gravelly clay loam, strong brown (7.5YR 5/6) moist; moderate medium and coarse prismatic structure; hard, firm, moderately sticky and moderately plastic; few fine roots; many very fine irregular pores and common very fine and fine tubular pores; many distinct clay films lining pores and on faces of peds; common organic stains; 30 percent gravel and 15 percent cobbles; strongly acid (pH 5.2).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 20 inches

## ***Elkberry Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Ridges, structural benches

*Parent material:* Volcanic ash over silty alluvium and/or reworked loess

*Slope range:* 15 to 40 percent

*Elevation:* 2,900 to 4,100 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands

### ***Typical Pedon***

Elkberry medial silt loam in an area of Elkberry-Elkberry, wet complex, 15 to 35 percent slopes, about 5 miles north and 5 miles west of Headquarters, Idaho; about 100 feet south and 1,150 feet west of the northeast corner of section 26, T. 39 N., R. 4 E.; latitude 46 degrees, 42 minutes, 8 seconds north and longitude 115 degrees, 54 minutes, 55 seconds west; U.S. Geological Survey John Lewis Mountain Quadrangle.

Soil Survey of Clearwater Area, Idaho

- Oe—0 to 1 inch; moderately decomposed plant material.
- A—1 to 3 inches; brown (10YR 4/3) medial silt loam, very dark brown (7.5YR 2.5/2) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; common very fine and fine tubular pores and many very fine and fine irregular pores; very strongly acid (pH 4.5); abrupt wavy boundary.
- Bw1—3 to 8 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure and weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium and few coarse roots throughout; common very fine and fine and few medium tubular pores and common very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; strongly acid (pH 5.4); clear wavy boundary.
- Bw2—8 to 16 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; common very fine and fine and few medium tubular pores and common very fine irregular pores; 2 percent fine rounded iron-manganese concretions; strongly acid (pH 5.5); abrupt wavy boundary.
- 2EB—16 to 19 inches; light yellowish brown (10YR 6/4) silt loam, brown (7.5YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, nonsticky and slightly plastic; many very fine and fine and few medium roots between peds; many very fine and few fine and medium tubular pores and common very fine irregular pores; common faint clay films on faces of peds and in pores; 2 percent fine mica flakes; strongly acid (pH 5.1); abrupt wavy boundary.
- 2E/B—19 to 25 inches; 85 percent E material that is very pale brown (10YR 7/4) silt loam, brown (7.5YR 4/4) moist, and 15 percent B material that is reddish yellow (7.5YR 6/6) silt loam, strong brown (7.5YR 5/6) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots between peds; many very fine and few fine and medium tubular pores and common very fine irregular pores; common distinct clay films on faces of peds and in pores; 5 percent fine mica flakes; 1 percent gravel; very strongly acid (pH 4.5); clear wavy boundary.
- 2B/E—25 to 36 inches; 95 percent B material that is reddish yellow (7.5YR 6/6) silt loam, strong brown (7.5YR 5/6) moist, and 5 percent E material that is very pale brown (10YR 7/4) silt loam, brown (7.5YR 4/4) moist; weak medium prismatic structure parting to moderate fine and medium subangular blocky; hard, friable, slightly sticky and moderately plastic; common very fine and fine and few medium roots between peds; common very fine tubular and irregular pores; many distinct clay films on faces of peds and in pores; few prominent clay films in pores; many distinct skeletons on faces of peds; 8 percent fine mica flakes; very strongly acid (pH 4.5); clear wavy boundary.
- 2Bt1—36 to 45 inches; reddish yellow (7.5YR 7/6) silty clay loam, reddish yellow (7.5YR 6/6) moist; strong fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots between peds; few very fine and fine tubular pores and common very fine irregular pores; many prominent clay films on faces of peds and in pores; common distinct skeletons on faces of peds; 5 percent fine mica flakes; very strongly acid (pH 4.5); clear wavy boundary.
- 2Bt2—45 to 55 inches; reddish yellow (7.5YR 7/6) silty clay loam, yellowish red (5YR 5/6) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and very plastic; few very fine and fine roots between peds; few very fine and fine tubular pores and common very fine irregular pores; many

prominent clay films on faces of peds and in pores; common distinct skeletal on faces of peds; 2 percent fine mica flakes; very strongly acid (pH 4.5); clear wavy boundary.

3Bt3—55 to 65 inches; reddish yellow (7.5YR 6/6) loam, strong brown (7.5YR 5/8) moist; moderate fine and medium subangular blocky structure; very hard, firm, slightly sticky and moderately plastic; few very fine and fine roots between peds; few very fine and fine tubular pores and common very fine irregular pores; few prominent clay films on faces of peds; common distinct skeletal on faces of peds; 10 percent fine mica flakes; very strongly acid (pH 4.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 19 inches

## ***Elkridge Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, hillslopes

*Parent material:* Volcanic ash over loess over colluvium and/or residuum derived from basalt

*Slope range:* 20 to 70 percent

*Elevation:* 1,600 to 3,500 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Andic Hapludalfs

### ***Typical Pedon***

Elkridge ashy silt loam in an area of Elkridge-Riswold complex, 40 to 70 percent slopes, about 4 miles north and 3 miles west of Orofino, Idaho; about 3,100 feet north and 1,100 feet east of the southwest corner of section 22, T. 38 N., R. 1 E.; latitude 46 degrees, 37 minutes, 20 seconds north and longitude 116 degrees, 19 minutes, 29 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 6 inches; dark yellowish brown (10YR 4/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine granular structure; soft, very friable; many very fine roots; many very fine interstitial pores; 5 percent gravel; neutral (pH 6.8); clear wavy boundary.

Bw—6 to 13 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky; many very fine and fine roots; many very fine interstitial pores; 5 percent gravel; neutral (pH 6.8); clear wavy boundary.

2Bt1—13 to 24 inches; brown (10YR 5/3) gravelly silt loam, dark brown (7.5YR 4/4) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine and medium roots; many very fine interstitial pores and many very fine and fine tubular pores; 15 percent gravel and 10 percent cobbles; common faint clay films on faces of peds and lining pores; many faint bleached silt coatings on faces of peds; slightly acid (pH 6.4); clear smooth boundary.

2Bt2—24 to 41 inches; pale brown (10YR 6/3) very gravelly silt loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly

sticky and slightly plastic; many very fine and common fine and medium roots; common very fine and fine tubular pores and common very fine interstitial pores; 40 percent gravel and 10 percent cobbles; common faint clay films on faces of peds and lining pores; many faint silt coatings on faces of peds; slightly acid (pH 6.2); clear smooth boundary.

2Bt3—41 to 54 inches; pale brown (10YR 6/3) extremely gravelly silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and fine tubular pores and common very fine interstitial pores; 50 percent gravel and 20 percent cobbles; common faint and few distinct clay films on faces of peds and lining pores; common faint bleached silt coatings on faces of peds; moderately acid (pH 6.0); gradual wavy boundary.

2Bt4—54 to 62 inches; light yellowish brown (10YR 6/4) extremely gravelly silty clay loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and few fine roots; common very fine and fine tubular pores and common very fine interstitial pores; 50 percent gravel and 20 percent cobbles; many faint and common distinct clay films on faces of peds and lining pores; common faint bleached silt coatings on faces of peds; moderately acid (pH 6.0).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 8 to 14 inches

## ***Fico Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over residuum derived from granite and/or gneiss

*Slope range:* 20 to 70 percent

*Elevation:* 4,300 to 5,700 feet

*Mean annual precipitation:* 45 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

*Taxonomic class:* Medial over loamy, amorphic over isotic Typic Vitricryands

### ***Typical Pedon***

Fico medial loam in an area of Fico-Weitas complex, 20 to 40 percent slopes, about 4 miles northeast of Pierce, Idaho; about 300 feet north and 1,200 feet east of the southwest corner of section 7, T. 37 N., R. 6 E.; latitude 46 degrees, 33 minutes, 28 seconds north and longitude 115 degrees, 45 minutes, 17 seconds west; U.S. Geological Survey Jaype Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 3 inches; moderately decomposed plant material.

A—3 to 8 inches; yellowish brown (10YR 5/4) medial loam, very dark brown (10YR 2/2) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many fine and medium and common coarse roots; many very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; 5 percent gravel; strongly acid (pH 5.3); clear smooth boundary.

Bw1—8 to 17 inches; light yellowish brown (10YR 6/4) medial loam, dark brown (7.5YR 3/4) moist; moderate fine and medium granular structure; soft, very



## Soil Survey of Clearwater Area, Idaho

friable, nonsticky and nonplastic; many fine and medium and common coarse roots; many very fine and fine irregular pores; 3 percent fine rounded iron-manganese concretions; 5 percent gravel; moderately acid (pH 5.6); clear smooth boundary.

2Bw2—17 to 25 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots throughout and common very fine roots on faces of peds; many fine and medium irregular pores; 15 percent gravel; moderately acid (pH 5.6); abrupt wavy boundary.

2BC—25 to 31 inches; light yellowish brown (10YR 6/4) loamy coarse sand, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots throughout and common very fine and few coarse roots on faces of peds; common very fine and fine irregular pores; 10 percent gravel; moderately acid (pH 5.7); gradual smooth boundary.

2C1—31 to 42 inches; pale yellow (2.5Y 7/4) gravelly loamy coarse sand, light olive brown (2.5Y 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots on faces of peds and few very fine roots throughout; few very fine irregular pores; 20 percent gravel; moderately acid (pH 5.8); gradual smooth boundary.

2C2—42 to 56 inches; pale yellow (2.5Y 7/3) gravelly coarse sand, light olive brown (2.5Y 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; 25 percent gravel; moderately acid (pH 5.6); clear smooth boundary.

2Cr—56 inches; decomposing granitic bedrock.

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 20 inches

*Depth to weathered bedrock:* 40 to 60 inches

### ***Flewsie Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Foothills, mountains

*Landform:* Hills, mountain slopes

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or quartzite

*Slope range:* 30 to 65 percent

*Elevation:* 2,800 to 4,800 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over isotic, frigid Typic Udivitrands

### ***Typical Pedon***

Flewsie ashy silt loam in an area of Brodeer, warm-Mushel, dry complex, 15 to 35 percent slopes, about 1 mile north and 6 miles east of Bovill, Idaho; about 400 feet south and 2,300 feet west of the northeast corner of section 25, T. 41 N., R. 1 E.; latitude 46 degrees, 52 minutes, 34 seconds north and longitude 116 degrees, 16 minutes, 32 seconds west; U.S. Geological Survey Bechtel Butte Quadrangle.



Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 7 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/3) moist; moderate very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine, medium, and coarse roots; many very fine, common fine, and few medium and coarse irregular pores; slightly acid (pH 6.4); clear smooth boundary.

Bw1—7 to 13 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots, common fine, medium, and coarse roots, and few very coarse roots; many very fine, common fine, and few medium irregular pores; slightly acid (pH 6.5); clear wavy boundary.

Bw2—13 to 16 inches; yellowish brown (10YR 6/4) ashy silt loam, brown (7.5YR 4/4) moist; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots, common fine, medium, and coarse roots, and few very coarse roots; many very fine and common fine and medium irregular pores; slightly acid (pH 6.5); abrupt wavy boundary.

2Bw3—16 to 23 inches; light yellowish brown (10YR 6/3) fine sandy loam, dark brown (7.5YR 3/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, common fine, and few medium roots; common very fine and few fine tubular pores; 2 percent gravel; slightly acid (pH 6.3); gradual wavy boundary.

2Bw4—23 to 31 inches; very pale brown (10YR 7/4) fine sandy loam, dark brown (7.5YR 3/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and few fine roots; many very fine and few fine irregular pores and few very fine tubular pores; 2 percent gravel; moderately acid (pH 6.0); gradual wavy boundary.

2BC—31 to 46 inches; very pale brown (10YR 7/4) fine sandy loam, dark yellowish brown (10YR 4/6) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and few fine roots; common very fine and fine irregular pores and common very fine and few fine tubular pores; 5 percent gravel; moderately acid (pH 5.9); gradual wavy boundary.

2C1—46 to 50 inches; very pale brown (10YR 7/4) loamy fine sand, yellowish brown (10YR 5/6) moist; massive; few very fine and fine roots; common very fine irregular pores and few very fine tubular pores; 10 percent gravel; moderately acid (pH 5.6); gradual wavy boundary.

2C2—50 to 62 inches; very pale brown (10YR 7/4) loamy fine sand, brownish yellow (10YR 6/6) moist; massive; few very fine and fine roots; common very fine irregular pores; 10 percent gravel; strongly acid (pH 5.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 20 inches

## ***Floodwood Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Foothills, mountains

*Landform:* Hills, mountain slopes

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or anorthosite

*Slope range:* 15 to 65 percent

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 1,600 to 4,800 feet

*Mean annual precipitation:* 40 to 65 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, isotic, frigid Andic Hapludalfs

### **Typical Pedon**

Floodwood ashy loam in an area of Floodwood-Keeler complex, 15 to 35 percent slopes, about 16 miles north and 3 miles west of Headquarters, Idaho; about 1,650 feet south and 450 feet west of the northeast corner of section 31, T. 41 N., R. 5 E.; latitude 46 degrees, 51 minutes, 28 seconds north and longitude 115 degrees, 52 minutes, 13 seconds west; U.S. Geological Survey Bertha Hill Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 3 inches; brown (7.5YR 5/3) ashy loam, dark brown (7.5YR 3/2) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots throughout; many very fine and fine irregular pores; 5 percent fine iron-manganese concretions; 2 percent gravel; slightly acid (pH 6.2); clear smooth boundary.

Bw—3 to 13 inches; light yellowish brown (10YR 6/4) ashy loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many fine and medium and common coarse roots throughout; many very fine and fine irregular pores; 10 percent iron-manganese concretions; 3 percent gravel; slightly acid (pH 6.2); abrupt wavy boundary.

2Bt1—13 to 20 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; few very fine roots throughout and common fine and medium and few coarse roots between peds; common very fine and fine irregular pores; common faint discontinuous brown (10YR 4/3) clay films on faces of peds; few discontinuous very pale brown (10YR 7/3) skeletalans on faces of peds; 1 percent fine mica flakes; 5 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

2Bt2—20 to 27 inches; yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few very fine roots throughout and common fine and medium roots between peds; common very fine tubular pores; common distinct continuous brown (10YR 4/3) clay films on faces of peds; few discontinuous pale brown (10YR 7/3) skeletalans on faces of peds; 1 percent fine mica flakes; 5 percent gravel and 5 percent cobbles; moderately acid (pH 5.8); abrupt smooth boundary.

2Bt3—27 to 35 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, slightly sticky and moderately plastic; few very fine roots throughout and common very fine and fine roots between peds; common very fine tubular pores; common continuous dark yellowish brown (10YR 4/4) clay films on faces of peds; common continuous very pale brown (10YR 7/3) skeletalans on faces of peds; 1 percent fine mica flakes; 10 percent gravel and 5 percent cobbles; moderately acid (pH 5.8); abrupt smooth boundary.

2Bt4—35 to 42 inches; very pale brown (10YR 7/4) fine sandy loam, light yellowish brown (10YR 6/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, nonsticky and slightly plastic; few very fine roots throughout and common very fine and fine roots between peds; common very

fine tubular pores; common continuous distinct dark yellowish brown (10YR 4/4) clay films on faces of peds; common yellowish brown (10YR 5/4) clay bands 0.25 to 0.50 inch thick and 2 to 3 inches apart; 2 percent fine mica flakes; 5 percent gravel; moderately acid (pH 5.6); abrupt wavy boundary.

2Bt5—42 to 55 inches; light yellowish brown (10YR 6/4) very fine sandy loam, dark yellowish brown (10YR 4/4) moist; weak coarse prismatic structure parting to moderate medium and coarse subangular blocky; hard, firm, slightly sticky and moderately plastic; few very fine roots throughout; few very fine tubular pores; common continuous distinct brown (10YR 4/3) clay films on faces of peds and in pores; 2 percent fine mica flakes; 5 percent gravel; moderately acid (pH 5.6); abrupt irregular boundary.

2C—55 to 63 inches; pale yellow (2.5Y 8/3) fine sandy loam, pale yellow (2.5Y 7/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots throughout; few very fine tubular pores; common distinct yellowish brown (10YR 5/4) clay bands 0.25 to 1.00 inch thick and 2 to 5 inches apart; 5 percent gravel; strongly acid (pH 5.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 9 to 12 inches

## ***Flumecreek Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 65 percent

*Elevation:* 3,600 to 5,000 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy-skeletal, amorphic over isotic, frigid Ultic Udivitrands

### ***Typical Pedon***

Flumecreek ashy loam, 35 to 65 percent slopes, about 9 miles north of Headquarters, Idaho; about 1,500 feet south and 650 feet east of the northwest corner of section 2, T. 39 N., R. 5 E.; latitude 46 degrees, 45 minutes, 23 seconds north and longitude 115 degrees, 48 minutes, 12 seconds west; U.S. Geological Survey Bertha Hill Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 10 inches; brown (10YR 4/3) ashy loam, dark brown (7.5YR 3/4) moist; weak fine and medium granular structure; very soft, very friable, nonsticky and nonplastic; many fine and medium roots; many very fine and fine irregular pores; 3 percent fine rounded iron-manganese concretions; 5 percent gravel; slightly acid (pH 6.4); clear smooth boundary.

Bw1—10 to 21 inches; brown (7.5YR 5/4) ashy loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many fine and medium and common coarse roots; many very fine and fine irregular pores; 1 percent fine

rounded iron-manganese concretions; 10 percent gravel; slightly acid (pH 6.2); abrupt smooth boundary.

2Bw2—21 to 32 inches; dark yellowish brown (10YR 4/4) and yellowish brown (10YR 5/6) very cobbly loam, brown (7.5YR 4/3) and dark yellowish brown (10YR 4/4) moist; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium and common coarse roots between peds; common very fine and fine irregular pores; few discontinuous patchy light gray (10YR 7/2) skeletalans coating faces of peds; 15 percent gravel, 35 percent cobbles, and 10 percent stones; slightly acid (pH 6.2); gradual smooth boundary.

2Bt1—32 to 43 inches; yellowish brown (10YR 5/6) and brown (7.5YR 5/4) very gravelly sandy clay loam, dark yellowish brown (10YR 4/6) moist; moderate very fine and fine subangular blocky structure; slightly hard, firm, moderately sticky and slightly plastic; common fine to coarse roots between peds; common very fine and fine irregular and tubular pores; few discontinuous distinct brown (7.5YR 4/4) clay films on faces of peds; few discontinuous distinct pink (7.5YR 7/3) skeletalans on faces of peds; 40 percent gravel and 15 percent cobbles; strongly acid (pH 5.1); clear wavy boundary.

2Bt2—43 to 52 inches; yellowish brown (10YR 5/6) extremely stony sandy clay loam, brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine and medium roots between peds and few very fine roots throughout; common very fine irregular pores and few very fine and fine tubular pores; few discontinuous distinct brown (7.5YR 4/4) clay films on faces of peds; 20 percent gravel, 15 percent cobbles, and 25 percent stones; very strongly acid (pH 4.9); clear smooth boundary.

2Bt3—52 to 60 inches; yellowish brown (10YR 5/6) extremely stony sandy loam, strong brown (7.5YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots between peds; common very fine irregular pores; few discontinuous distinct brown (7.5YR 4/4) clay films on faces of peds; 15 percent gravel, 20 percent cobbles, and 30 percent stones; very strongly acid (pH 4.9); gradual wavy boundary.

2Bt4—60 to 67 inches; brownish yellow (10YR 6/6) extremely stony sandy loam, yellowish brown (10YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots between peds; few very fine irregular pores; few discontinuous distinct brown (7.5YR 5/4) clay films on faces of peds; 10 percent gravel, 35 percent cobbles, and 30 percent stones; very strongly acid (pH 5.0).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 19 inches

## ***Fordcreek Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands

*Landform:* Canyons, structural benches

*Parent material:* Loess over residuum derived from granite and/or metamorphic rock

*Slope range:* 5 to 75 percent

*Elevation:* 1,000 to 2,200 feet

*Mean annual precipitation:* 23 to 28 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Ultic Haploxeralfs

### **Typical Pedon**

Fordcreek loam in an area of Ahsahka-Fordcreek complex, 20 to 40 percent slopes, about 1 mile northwest of Orofino, Idaho; about 3,650 feet north and 800 feet west of the southeast corner of section 1, T. 36 N., R. 1 E.; latitude 46 degrees, 29 minutes, 45 seconds north and longitude 116 degrees, 15 minutes, 58 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

A1—0 to 3 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and fine irregular pores; 5 percent gravel; neutral (pH 6.6); clear wavy boundary.

A2—3 to 6 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine irregular pores and few medium tubular pores; 5 percent gravel; slightly acid (pH 6.4); clear smooth boundary.

Bt1—6 to 16 inches; pale brown (10YR 6/3) loam, dark yellowish brown (10YR 3/4) moist; weak fine prismatic structure parting to moderate fine subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine and fine and common medium tubular pores and many very fine and fine irregular pores; many faint bleached silt coatings on faces of peds; many faint clay films on faces of peds and lining pores; 5 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

Bt2—16 to 27 inches; yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 3/4) moist; moderate fine prismatic structure parting to moderate fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots; many very fine and fine and common medium tubular pores and many very fine and fine irregular pores; common bleached silt coatings along faces of prisms; common distinct and many faint clay films on faces of peds and lining pores; 10 percent gravel; moderately acid (pH 5.8); clear wavy boundary.

Bt3—27 to 41 inches; brown (7.5YR 5/4) clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium prismatic structure parting to moderate fine angular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots; many very fine and few medium irregular pores and common very fine tubular pores; common bleached silt coatings along faces of prisms; common prominent and many faint clay films on faces of peds and lining pores; 10 percent gravel; moderately acid (pH 5.8); abrupt smooth boundary.

Cr—41 inches; weathered granitic rock.

### **Range in Characteristics**

*Depth to weathered bedrock:* 40 to 60 inches

## **Garveson Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high



## Soil Survey of Clearwater Area, Idaho

*Landscape:* Foothills, mountains

*Landform:* Hills, mountain slopes

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 65 percent

*Elevation:* 2,200 to 4,800 feet

*Mean annual precipitation:* 30 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over sandy or sandy-skeletal, amorphic over isotic, frigid Typic Udivitrands

### **Typical Pedon**

Garveson ashy silt loam in an area of Jacot-Garveson complex, 15 to 35 percent slopes; Benewah County, Idaho; about 1.5 miles west of Pettis Peak; about 500 feet south and 800 feet west of the northeast corner of section 22, T. 45 N., R. 1 W.; latitude 47 degrees, 14 minutes, 16 seconds north and longitude 116 degrees, 26 minutes, 20 seconds west; U.S. Geological Survey Santa Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 4 inches; brown (10YR 5/3) ashy silt loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and few fine tubular and irregular pores; 5 percent gravel; neutral (pH 7.0); clear wavy boundary.

Bw1—4 to 9 inches; yellowish brown (10YR 5/4) ashy silt loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; common very fine and few fine tubular and irregular pores; 5 percent gravel; neutral (pH 7.0); clear wavy boundary.

Bw2—9 to 18 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure; soft, very friable, nonsticky and slightly plastic; common very fine and fine and few medium roots; common very fine and few fine tubular and irregular pores; 10 percent gravel; neutral (pH 7.0); abrupt wavy boundary.

2BC—18 to 25 inches; pale brown (10YR 6/3) very gravelly loamy coarse sand, brown (10YR 4/3) moist; weak coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; common very fine and few fine tubular and irregular pores; 40 percent gravel; slightly acid (pH 6.5); clear wavy boundary.

2C1—25 to 32 inches; very pale brown (10YR 7/3) very gravelly loamy coarse sand, brown (10YR 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; many very fine irregular pores; 40 percent gravel; moderately acid (pH 6.0); gradual wavy boundary.

2C2—32 to 62 inches; variegated very gravelly coarse sand; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; many very fine irregular pores; 40 percent gravel; moderately acid (pH 6.0).

### **Range in Characteristics**

*Thickness of volcanic ash mantle:* 14 to 20 inches

### **Gramil Series**

*Depth class:* Very deep

*Drainage class:* Somewhat poorly drained



Soil Survey of Clearwater Area, Idaho

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Plateaus

*Landform:* Lake terraces

*Parent material:* Alluvium and/or loess over lacustrine deposits

*Slope range:* 0 to 5 percent

*Elevation:* 3,000 to 3,200 feet

*Mean annual precipitation:* 30 to 35 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Very-fine, kaolinitic, frigid Vitrandic Hapludalfs

**Typical Pedon**

Gramil ashy silty clay loam in an area of Gramil-Reggear complex, 2 to 6 percent slopes, about 2.5 miles south and 0.5 mile east of Weippe, Idaho; about 200 feet north and 2,000 feet west of the southeast corner of section 26, T. 35 N., R. 4 E.; latitude 46 degrees, 20 minutes, 23 seconds north and longitude 115 degrees, 55 minutes, 9 seconds west; U.S. Geological Survey Weippe South Quadrangle.

Ap1—0 to 4 inches; dark brown (10YR 3/3) ashy silty clay loam, very dark brown (10YR 2/2) moist; weak very fine and fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine, fine, and medium irregular pores; moderately acid (pH 6.0); clear smooth boundary.

Ap2—4 to 12 inches; dark brown (10YR 4/3) ashy silty clay loam, very dark brown (10YR 2/2) moist; weak medium prismatic structure parting to moderate fine and medium subangular blocky; hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; many very fine and fine irregular pores and common very fine tubular pores; moderately acid (pH 6.0); clear smooth boundary.

Bw—12 to 19 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse prismatic structure parting to moderate medium and coarse subangular blocky; hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine irregular pores and common fine and medium tubular pores; strongly acid (pH 5.2); clear wavy boundary.

B/E—19 to 27 inches; B part is very pale brown (10YR 7/4) clay loam, dark yellowish brown (10YR 4/4) moist, and E part is very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; moderate very fine and fine subangular blocky structure; B part is very hard, very firm, moderately sticky and moderately plastic and E part is slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine and common fine and medium irregular pores and common fine tubular pores; very strongly acid (pH 4.8); abrupt wavy boundary.

2Btss1—27 to 32 inches; dark yellowish brown (10YR 4/6) clay, dark yellowish brown (10YR 4/4) moist; strong medium and coarse columnar structure; extremely hard, very firm, very sticky and very plastic; common very fine roots; few very fine and fine irregular and tubular pores; common distinct clay films in pores and on faces of peds; common prominent very pale brown (10YR 7/3) uncoated silt grains on faces of peds; few nonintersecting slickensides; very strongly acid (pH 4.6); clear wavy boundary.

2Btss2—32 to 39 inches; yellowish brown (10YR 5/6) clay, dark yellowish brown (10YR 4/4) moist; moderate coarse prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine roots; few very fine irregular pores; common distinct clay films in pores and on faces of peds; few nonintersecting slickensides; very strongly acid (pH 4.7); gradual wavy boundary.

- 3Bss—39 to 62 inches; white (10YR 8/1) clay, light gray (10YR 7/1) moist; weak very coarse subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; common intersecting slickensides; very strongly acid (pH 4.8); clear wavy boundary.
- 3BC—62 to 70 inches; white (10YR 8/1) sandy clay, light gray (10YR 7/1) moist; weak very coarse subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine irregular pores; strongly acid (pH 5.2).

### ***Range in Characteristics***

*Depth to seasonal high perched water table:* At the surface to a depth of 6 inches in January through April

*Ponding:* Occasional, brief periods in November through July and rare, very brief periods in August through October

## ***Grandad Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 75 percent

*Elevation:* 1,600 to 4,600 feet

*Mean annual precipitation:* 30 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over paramicaceous, frigid Alfic Udivitrands

### ***Typical Pedon***

Grandad ashy silt loam, 15 to 40 percent slopes, about 10 miles east of Bovill, Idaho; about 1,480 feet south and 1,220 feet west of the northeast corner of section 11, T. 40 N., R. 1 E.; latitude 46 degrees, 49 minutes, 23 seconds north and longitude 116 degrees, 17 minutes, 53 seconds west; U.S. Geological Survey McGary Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 3 inches; yellowish brown (10YR 5/4) ashy silt loam, very dark brown (7.5YR 2.5/2) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine roots throughout; many very fine and fine irregular pores; 2 percent fine mica flakes; slightly acid (pH 6.3); abrupt smooth boundary.

Bw1—3 to 10 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/3) moist; weak fine subangular blocky structure parting to weak fine and very fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores and few very fine and fine tubular pores; 2 percent fine mica flakes; 1 percent gravel; slightly acid (6.5); clear smooth boundary.

Bw2—10 to 19 inches; brownish yellow (10YR 6/6) ashy silt loam, brown (7.5YR 4/4) moist; moderate fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots throughout; many very fine irregular pores and few very fine and fine

## Soil Survey of Clearwater Area, Idaho

- tubular pores; 2 percent fine mica flakes; 1 percent gravel; slightly acid (pH 6.4); abrupt wavy boundary.
- 2Bt1—19 to 22 inches; light yellowish brown (10YR 6/4) loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; moderately hard, friable, slightly sticky and moderately plastic; many very fine and fine roots between peds and few medium roots throughout; common very fine irregular and tubular pores; many (40 percent) faint silt coatings in pores and on faces of peds; 15 percent fine mica flakes; 3 percent gravel; slightly acid (pH 6.1); clear wavy boundary.
- 2Bt2—22 to 30 inches; very pale brown (10YR 7/4) gravelly loam, dark yellowish brown (10YR 3/6) moist; moderate fine and medium subangular blocky structure; moderately hard, friable, slightly sticky and moderately plastic; common very fine and fine roots between peds and few medium roots throughout; common very fine irregular and tubular pores; common (5 percent) distinct clay films in pores and common (10 percent) faint clay films in pores; many (30 percent) faint silt coatings on faces of peds; 35 percent fine mica flakes; 15 percent gravel and 5 percent cobbles; slightly acid (pH 6.1); clear wavy boundary.
- 2Bt3—30 to 39 inches; very pale brown (10YR 7/4) gravelly loam, yellowish brown (10YR 5/4) moist; moderate fine and medium subangular blocky structure; moderately hard, friable, nonsticky and moderately plastic; common very fine and fine roots between peds; common very fine irregular pores and few very fine tubular pores; common (15 percent) distinct clay films in pores and common (5 percent) faint clay films on faces of peds; 35 percent fine mica flakes; 20 percent gravel and 10 percent cobbles; moderately acid (pH 5.8); clear wavy boundary.
- 2BC—39 to 45 inches; very pale brown (10YR 7/4) gravelly loam, strong brown (7.5YR 4/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots between peds; common very fine irregular pores and few very fine tubular pores; common (5 percent) distinct clay films in pores and common (8 percent) faint clay films on faces of peds; 30 percent fine mica flakes; 15 percent gravel; moderately acid (pH 5.8); clear wavy boundary.
- 2C1—45 to 58 inches; brownish yellow (10YR 6/6) loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine, fine, and medium roots throughout; common very fine irregular pores; 45 percent fine mica flakes; 10 percent gravel; strongly acid (pH 5.5); clear wavy boundary.
- 2C2—58 to 64 inches; dark yellowish brown (10YR 4/6) paragravelly sandy loam, dark brown (7.5YR 3/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots throughout; common very fine irregular pores; 55 percent fine mica flakes; 15 percent paragravel; strongly acid (pH 5.2).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 25 inches

## ***Grangemont Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains, plateaus

*Landform:* Hillslopes, mountain slopes, broad ridges, structural benches

*Parent material:* Volcanic ash over reworked loess

*Slope range:* 5 to 35 percent

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 1,600 to 3,500 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-silty, mixed, active, frigid Andic Glossudalfs

### **Typical Pedon**

Grangemont ashy silt loam in an area of Grangemont-Kauder complex, 5 to 20 percent slopes, about 4 miles north and 1.5 miles west of Weippe, Idaho; about 400 feet north and 1,100 feet east of the southwest corner of section 21, T. 36 N., R. 4 E.; latitude 46 degrees, 26 minutes, 33 seconds north and longitude 115 degrees, 58 minutes, 8 seconds west; U.S. Geological Survey Weippe North Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

Oe—2 to 3 inches; moderately decomposed plant material.

A—3 to 7 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 4/4) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular and tubular pores; neutral (pH 6.6); clear smooth boundary.

Bw—7 to 14 inches; strong brown (7.5YR 5/6) ashy silt loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure parting to weak very fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine, common fine, and few medium tubular pores; neutral (pH 6.6); abrupt wavy boundary.

2B/E1—14 to 21 inches; Bt part is brown (7.5YR 5/4) silt loam, dark brown (7.5YR 4/4) moist, and E part is very pale brown (10YR 7/3) silt loam, dark yellowish brown (10YR 4/4) moist; slightly hard, firm, slightly sticky and slightly plastic; weak thick platy structure parting to moderate medium and coarse subangular blocky; many medium, common very fine and fine, and few coarse roots; many very fine and fine tubular pores and many very fine and fine vesicular pores in areas; many faint clay films in pores; many thin bleached silt coatings on all surfaces; slightly acid (pH 6.1); abrupt wavy boundary.

2B/E2—21 to 30 inches; Bt part is brown (7.5YR 5/4) silt loam, dark brown (7.5YR 4/4) moist, and E part is very pale brown (10YR 7/3) silt loam, dark yellowish brown (10YR 4/4) moist; hard, very firm, moderately sticky and moderately plastic; moderate medium and coarse subangular blocky structure; common very fine, fine, and medium and few coarse roots; many very fine and few medium vesicular pores in B part and many very fine and fine tubular pores in E part; many distinct clay films in some pores and many faint clay films on faces of peds beneath bleached sand and silt coatings; many manganese stains on faces of peds; continuous prominent silt coatings on faces of peds in B material; 15 to 25 percent of horizon is fragic material; E material is in pockets and streaks resembling interfingers; slightly acid (pH 6.2); clear smooth boundary.

2B/E3—30 to 38 inches; Bt part is strong brown (7.5YR 5/6) silty clay loam, dark brown (7.5YR 4/4) moist, and E part is very pale brown (10YR 7/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure parting to moderate fine and medium subangular blocky; hard, firm, slightly sticky and moderately plastic; common fine and medium and few very fine roots; many very fine and fine and common medium tubular pores; many distinct clay films in some pores and many faint clay films on faces of peds beneath bleached sand and silt coatings; continuous faint silt coatings on faces of peds; common manganese stains; slightly acid (pH 6.1); gradual smooth boundary.

2Bt1—38 to 60 inches; brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to strong medium and coarse subangular blocky; hard, firm, very sticky and very plastic; common fine and few very fine and medium roots; common very fine, fine, and medium tubular pores; continuous prominent clay films lining pores and common faint clay films on faces of peds; slightly brittle; 10 to 15 percent fragic material; 5 percent gravel; common faint silt coatings on faces of peds; moderately acid (pH 5.9); clear smooth boundary.

2Bt2—60 to 71 inches; brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to weak medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and fine and few medium tubular pores and many very fine and fine vesicular pores; continuous distinct clay films in pores and common faint clay films on faces of peds; common distinct uncoated silt grains on faces of peds; 5 percent gravel; moderately acid (pH 5.7); gradual smooth boundary.

2Bt3—71 to 95 inches; brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 4/4) moist; strong medium and coarse prismatic structure parting to moderate medium and coarse subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium tubular and vesicular pores; continuous distinct clay films on faces of peds and continuous prominent clay films lining pores; 5 percent gravel; moderately acid (pH 5.7).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 7 to 13 inches

## ***Grasshopper Series***

*Depth class:* Very deep

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains, plateaus

*Landform:* Flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Elevation:* 2,750 to 3,500 feet

*Mean annual precipitation:* 32 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, mixed, active, frigid Aquandic Endoaqualfs

### ***Typical Pedon***

Grasshopper ashy loam, 0 to 3 percent slopes, about 1 mile northeast of Weippe, Idaho; about 750 feet north and 1,850 feet east of the southwest corner of section 2, T. 35 N., R. 4 E.; latitude 46 degrees, 24 minutes, 1 second north and longitude 115 degrees, 55 minutes, 28 seconds west; U.S. Geological Survey Weippe North Quadrangle.

A—0 to 8 inches; brown (10YR 4/3) ashy loam, dark brown (10YR 3/3) moist; moderate very fine and fine subangular blocky structure; soft, friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and few fine irregular pores; 1 percent fine mica flakes; neutral (pH 6.9); abrupt smooth boundary.



## Soil Survey of Clearwater Area, Idaho

- AB—8 to 16 inches; brown (10YR 5/3) ashy silt loam, dark brown (10YR 3/3) moist; moderate very fine and fine subangular blocky structure; soft, friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine tubular and irregular pores and few fine irregular pores; few very fine faint redoximorphic concentrations that are yellowish red (5YR 4/6) moist; 1 percent fine mica flakes; neutral (pH 6.8); clear wavy boundary.
- Btg—16 to 22 inches; pale brown (10YR 6/3) clay loam, dark grayish brown (10YR 4/2) moist; strong very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and common fine irregular pores and common very fine tubular pores; common very fine and fine prominent redoximorphic concentrations that are strong brown (7.5YR 4/6) moist; common faint dark grayish brown (10YR 4/2) clay films on faces of peds and in pores; 2 percent fine mica flakes; slightly acid (pH 6.5); clear wavy boundary.
- E—22 to 31 inches; light brownish gray (10YR 6/2) and light yellowish brown (10YR 6/4) sandy loam, dark gray (10YR 4/1) and dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine irregular pores and common very fine and fine tubular pores; many fine and medium prominent redoximorphic concentrations that are brown (10YR 4/3) moist and few fine prominent redoximorphic concentrations that are yellowish red (5YR 6/6) moist; 2 percent fine mica flakes; slightly acid (pH 6.3); clear smooth boundary.
- EB—31 to 40 inches; dark yellowish brown (10YR 4/4) and pale brown (10YR 6/3) sandy loam, grayish brown (10YR 5/2) moist; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine and fine and common medium tubular pores; many fine and medium prominent redoximorphic concentrations that are strong brown (7.5YR 4/6) moist and common medium distinct redoximorphic depletions that are gray (10YR 5/1) moist; common faint grayish brown (10YR 5/2) clay films on faces of peds and in pores; 2 percent fine mica flakes; moderately acid (pH 6.0); abrupt smooth boundary.
- Btgb—40 to 53 inches; dark gray (10YR 4/1) and grayish brown (10YR 5/2) loam, dark gray (5Y 4/1) moist; moderate very coarse prismatic structure; hard, firm, slightly sticky and slightly plastic; many very fine roots on faces of peds and few roots in interior of peds; many very fine and common fine tubular pores; many fine and medium prominent redoximorphic concentrations that are brown (10YR 4/3) moist and are inside prisms and along root channels; many distinct dark gray (2.5Y 4/1) clay films on faces of peds and in pores; 2 percent fine mica flakes; moderately acid (pH 5.9); abrupt wavy boundary.
- Cgb1—53 to 58 inches; brown (10YR 4/3) and dark yellowish brown (10YR 4/6) extremely gravelly sandy clay loam, dark yellowish brown (10YR 4/6) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine and fine irregular pores and common very fine tubular pores; 1 percent fine mica flakes; 60 percent gravel; moderately acid (pH 6.0); abrupt wavy boundary.
- Cgb2—58 to 64 inches; gray (5YR 5/1) loam, dark gray (5YR 4/1) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores and common very fine and fine irregular pores; 1 percent fine mica flakes, 5 percent gravel; slightly acid (pH 6.1).

### **Range in Characteristics**

*Depth to seasonal high apparent water table:* At the surface to a depth of 24 inches in December through March

*Flooding:* Occasional, brief periods in December through March



## **Grice Series**

The Grice series occurs in this survey area only as a minor component in detailed soil map units 9 and 99.

*Depth class:* Very deep

*Drainage class:* Very poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Flood plains, saturated areas below springs on hillslopes, depressions near streams

*Parent material:* Volcanic ash and herbaceous organic material over alluvium

*Slope range:* 0 to 5 percent

*Elevation:* 2,200 to 4,800 feet

*Mean annual precipitation:* 32 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

*Taxonomic class:* Loamy, mixed, dysic Terric Cryohemists

### **Typical Pedon**

Grice mucky peat in an area of Aquandic Cryaquepts, 0 to 5 percent slopes, about 6 miles northeast of Headquarters, Idaho; about 1,900 feet north and 2,500 feet west of the southeast corner of section 10, T. 38 N., R. 6 E.; latitude 46 degrees, 38 minutes, 56 seconds north and longitude 115 degrees, 41 minutes, 10 seconds west; U.S. Geological Survey Browns Rock Quadrangle.

Oe—0 to 17 inches; black (2.5Y 2.5/1) mucky peat, broken face and rubbed, dark grayish brown (2.5Y 4/2) dry; about 70 percent fiber; pyrophosphate color test very pale brown (10YR 8/4); many very fine, fine, and medium roots; extremely acid (pH 4.4 in calcium chloride); abrupt wavy boundary.

A—17 to 25 inches; very dark grayish brown (2.5Y 3/2) silt loam, light brownish gray (10YR 6/2) dry; moderate very fine and fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine and medium roots; few very fine and fine irregular pores; very strongly acid (pH 4.8); abrupt wavy boundary.

Bw—25 to 30 inches; olive brown (2.5Y 4/4) silt loam, pale yellow (2.5Y 7/4) dry; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; few very fine irregular pores; strongly acid (pH 5.3); abrupt wavy boundary.

Cg1—30 to 35 inches; dark gray (5Y 4/1) silt loam, very pale brown (10YR 8/2) dry; common fine distinct olive brown (2.5Y 4/4) masses of iron accumulation; massive; very hard, firm, nonsticky and nonplastic; common very fine and few fine roots; common very fine irregular pores and few fine tubular pores; very strongly acid (pH 4.6); clear wavy boundary.

Cg2—35 to 39 inches; gray (5Y 5/1) loam, very pale brown (10YR 8/2) dry; few medium distinct light olive brown (2.5Y 5/4) masses of iron accumulation; massive; hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine irregular pores and few fine tubular pores; very strongly acid (pH 4.6); clear wavy boundary.

Cg3—39 to 43 inches; gray (5Y 5/1) loam, light gray (2.5Y 7/2) dry; massive; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine irregular pores; 10 percent gravel; very strongly acid (pH 4.7); abrupt wavy boundary.

Cg4—43 to 47 inches; dark greenish gray (5GY 4/1) gravelly coarse sandy loam, grayish brown (2.5Y 5/2) dry; massive; slightly hard, very friable, nonsticky and

## Soil Survey of Clearwater Area, Idaho

nonplastic; few very fine roots; many very fine and common fine irregular pores; 2 percent fine mica flakes; 25 percent gravel; very strongly acid (pH 4.9); clear wavy boundary.

Cg5—47 to 53 inches; dark greenish gray (5GY 4/1) gravelly coarse sandy loam, olive gray (5Y 5/2) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine and common fine irregular pores; 2 percent fine mica flakes; 30 percent gravel; very strongly acid (pH 4.9); clear wavy boundary.

Cg6—53 to 60 inches; dark greenish gray (5GY 4/1) extremely gravelly loamy coarse sand; single grain; loose, nonsticky and nonplastic; few very fine roots; many very fine and fine interstitial pores; 2 percent fine mica flakes; 65 percent gravel; very strongly acid (pH 5.0).

### ***Range in Characteristics***

*Thickness of organic epipedon:* 16 to 21 inches

*Depth to seasonal high apparent water table:* At the surface to a depth of 12 inches in January through December

*Flooding:* Frequent, long periods in January through December

*Ponding:* Frequent, very long periods in November through July

## **Gwin Series**

*Depth class:* Shallow to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands

*Landform:* Canyons

*Parent material:* Loess and/or colluvium derived from greenstone and/or basalt

*Slope range:* 10 to 75 percent

*Elevation:* 1,200 to 3,000 feet

*Mean annual precipitation:* 22 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Lithic Argixerolls

### ***Typical Pedon***

Gwin cobbly silt loam in an area of Gwin-Kettenbach-Keuterville complex, 10 to 25 percent slopes, about 2 miles southeast of Orofino, Idaho; about 2,000 feet south and 200 feet west of the northeast corner of section 16, T. 36 N., R. 2 E.; latitude 46 degrees, 27 minutes, 57 seconds north and longitude 116 degrees, 12 minutes, 9 seconds west; U.S. Geological Survey Orofino East Quadrangle.

A1—0 to 4 inches; dark yellowish brown (10YR 3/4) cobbly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to weak fine granular; hard, friable, slightly sticky and slightly plastic; many very fine and medium roots; many very fine irregular pores and common very fine tubular pores; 10 percent gravel and 15 percent cobbles; slightly acid (pH 6.4); clear wavy boundary.

A2—4 to 8 inches; dark yellowish brown (10YR 3/4) very gravelly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and medium and common coarse roots; many fine irregular pores and few very fine continuous tubular pores; few faint patchy clay films on faces of peds; 30 percent gravel and 15 percent cobbles; slightly acid (pH 6.2); clear smooth boundary.

## Soil Survey of Clearwater Area, Idaho

Bt—8 to 13 inches; brown (7.5YR 4/4) very gravelly silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; many very fine and few fine irregular pores; many distinct clay films on faces of peds and in pores; 30 percent gravel and 20 percent cobbles; slightly acid (pH 6.2); abrupt smooth boundary.  
R—13 inches; fractured basalt.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 7 to 10 inches  
*Depth to basalt:* 11 to 19 inches

### ***Handoff Series***

*Depth class:* Very deep  
*Drainage class:* Well drained  
*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high  
*Landscape:* Mountains  
*Landform:* Drainageways, mountain slopes  
*Parent material:* Volcanic ash over colluvium derived from metamorphic rock and/or granite  
*Slope range:* 15 to 75 percent  
*Elevation:* 4,500 to 5,500 feet  
*Mean annual precipitation:* 40 to 55 inches  
*Mean annual air temperature:* 38 to 41 degrees F  
*Frost-free period:* 30 to 100 days  
*Taxonomic class:* Medial over loamy-skeletal, glassy over isotic Vitric Fulvicryands

### ***Typical Pedon***

Handoff medial loam in an area of Vaywood-Handoff complex, 15 to 35 percent slopes, about 14 miles north of Headquarters, Idaho; about 500 feet south and 500 feet west of the northeast corner of section 13, T. 40 N., R. 5 E.; latitude 46 degrees, 49 minutes, 0 seconds north and longitude 115 degrees, 45 minutes, 56 seconds west; U.S. Geological Survey Berthahill Hill Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.  
A1—2 to 11 inches; dark brown (10YR 3/3) medial loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium roots; many very fine and fine irregular pores; 1 percent fine rounded iron-manganese concretions; 1 percent fine mica flakes; 5 percent gravel; strongly acid (pH 5.1); clear smooth boundary.  
A2—11 to 22 inches; brown (7.5YR 4/3) medial loam, dark brown (7.5YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many fine and medium and few coarse roots; many very fine and fine irregular pores; 1 percent fine rounded iron-manganese concretions; three 3-inch-wide krotovinas filled with surface material; 1 percent fine mica flakes; 10 percent gravel; strongly acid (pH 5.1); clear smooth boundary.  
Bw1—22 to 30 inches; yellowish brown (10YR 5/4) gravelly medial loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium and few coarse roots; common very fine irregular pores and few fine tubular pores; 1 percent fine rounded iron-manganese concretions; 1 percent fine mica flakes; 10 percent gravel and 5 percent cobbles; very strongly acid (pH 4.6); abrupt wavy boundary.

- 2Bw2—30 to 39 inches; light yellowish brown (10YR 6/4) very gravelly loam, dark yellowish brown (10YR 4/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots between peds; common very fine and fine irregular and tubular pores; one 3-inch-wide krotovina filled with volcanic ash; 1 percent fine mica flakes; 25 percent gravel, 10 percent channers, 5 percent cobbles, and 5 percent flagstones; very strongly acid (pH 4.5); clear wavy boundary.
- 2Bw3—39 to 45 inches; light yellowish brown (2.5Y 6/4) very gravelly sandy loam, light olive brown (2.5Y 5/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots between peds; few very fine irregular and tubular pores; 1 percent fine mica flakes; 35 percent gravel, 5 percent channers, 10 percent cobbles, and 5 percent flagstones; very strongly acid (pH 4.6); clear wavy boundary.
- 2BC—45 to 54 inches; yellowish brown (10YR 5/6) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; few very fine irregular pores; 1 percent fine mica flakes; 50 percent gravel, 10 percent cobbles, and 10 percent stones; very strongly acid (pH 4.8); clear wavy boundary.
- 2C—54 to 64 inches; yellowish brown (10YR 5/6) extremely cobbly loamy coarse sand, dark yellowish brown (10YR 4/6) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; few very fine irregular pores; 2 percent fine mica flakes; 20 percent gravel, 40 percent cobbles, and 10 percent stones; very strongly acid (pH 5.0).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 17 to 28 inches

## ***Hildebrand Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Terraces

*Parent material:* Volcanic ash over alluvium

*Slope range:* 2 to 12 percent

*Elevation:* 2,800 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, mixed, active, frigid Andic Hapludalfs

### ***Typical Pedon***

Hildebrand ashy silt loam in an area of Hildebrand-Spacecreek complex, 2 to 12 percent slopes, about 11 miles southeast of Elk River, Idaho; about 800 feet north and 400 feet west of the southeast corner of section 32, T. 39 N., R. 3 E.; latitude 46 degrees, 40 minutes, 15 seconds north and longitude 116 degrees, 5 minutes, 42 seconds west; U.S. Geological Survey Little Green Mountain Quadrangle.

A—0 to 4 inches; grayish brown (10YR 5/2) ashy silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine roots throughout; many very fine and fine irregular pores; strongly acid (pH 5.5); abrupt wavy boundary.

## Soil Survey of Clearwater Area, Idaho

- Bw—4 to 12 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine, common fine, and few medium roots throughout; many very fine and fine irregular pores; strongly acid (pH 5.4); clear wavy boundary.
- 2Bt1—12 to 25 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 3/4) moist; few fine faint redoximorphic concentrations; moderate medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common very fine and fine roots along faces of peds; common very fine irregular pores and few fine tubular pores; few faint clay films on faces of peds; strongly acid (pH 5.5); clear wavy boundary.
- 2Bt2—25 to 36 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; common fine and few medium distinct redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist; moderate fine and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common very fine and fine roots along faces of peds; common very fine irregular pores and few fine tubular pores; common faint dark brown (10YR 3/3) clay films on faces of peds; strongly acid (pH 5.3); clear wavy boundary.
- 2Bt3—36 to 40 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; many fine and medium and few coarse distinct redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist; moderate fine and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; few very fine and fine roots along faces of peds; common very fine irregular pores and few fine tubular pores; strongly acid (pH 5.4); clear wavy boundary.
- 2C1—40 to 45 inches; light yellowish brown (10YR 6/4) silt loam, yellowish brown (10YR 5/4) moist; many fine and medium and common coarse distinct redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist; massive; soft, friable, slightly sticky and slightly plastic; few very fine roots along faces of peds; common very fine irregular pores; strongly acid (pH 5.5); clear wavy boundary.
- 2C2—45 to 60 inches; light yellowish brown (10YR 6/4) silt loam, yellowish brown (10YR 5/4) moist; many fine to coarse distinct redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist; massive; soft, friable, slightly sticky and slightly plastic; few very fine roots along faces of peds; common very fine irregular pores; moderately acid (pH 5.6).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 8 to 13 inches

*Depth to seasonal high apparent water table:* 14 to 43 inches in January through May

### ***Hubub Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, structural benches

*Parent material:* Volcanic ash over alluvium and/or colluvium

*Slope range:* 5 to 40 percent

*Elevation:* 1,600 to 3,900 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days



## Soil Survey of Clearwater Area, Idaho

*Taxonomic class:* Ashy over loamy, amorphic over mixed, active, frigid Alfic Udivitrands

### ***Typical Pedon***

Hubub ashy silt loam in an area of Hubub-Dworshak complex, 5 to 20 percent slopes, about 3 miles north and 9 miles east of Elk River, Idaho; about 1,900 feet north and 2,150 feet east of the southwest corner of section 7, T. 40 N., R. 4 E.; latitude 46 degrees, 49 minutes, 22 seconds north and longitude 116 degrees, 0 minutes, 24 seconds west; U.S. Geological Survey Elk Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 5 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 3/3) moist; weak fine and medium granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine and common fine and medium irregular pores and few coarse tubular pores; 5 percent fine rounded iron-manganese concretions; slightly acid (pH 6.2); abrupt wavy boundary.

Bw1—5 to 11 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure parting to moderate very fine and fine granular; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and common coarse and very coarse roots; many very fine and common fine irregular pores and few medium and coarse tubular pores; 2 percent fine rounded iron-manganese concretions; moderately acid (pH 6.0); clear wavy boundary.

Bw2—11 to 17 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to moderate very fine and fine granular; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and common coarse and very coarse roots; many very fine, common fine, and few medium and coarse irregular pores; 2 percent fine rounded iron-manganese concretions; moderately acid (pH 6.0); abrupt wavy boundary.

2E—17 to 19 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak fine and medium granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; common very fine irregular and many very fine and few fine tubular pores; moderately acid (pH 5.6); abrupt wavy boundary.

2Bt1—19 to 24 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; weak medium prismatic structure parting to moderate fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; common very fine irregular pores and many very fine and few fine tubular pores; few faint patchy clay films on faces of peds; few faint skeletons on faces of peds; moderately acid (pH 5.6); clear wavy boundary.

2Bt2—24 to 34 inches; yellowish brown (10YR 5/4) silt loam, brown (7.5YR 4/4) moist; weak medium prismatic structure parting to strong fine and medium subangular blocky; hard, friable, slightly sticky and slightly plastic; common very fine and few medium and coarse roots; common very fine irregular pores and many very fine and few fine tubular pores; common faint clay films in pores and few faint clay films on faces of peds; few faint skeletons on faces of peds; moderately acid (pH 5.6); clear wavy boundary.

2Bt3—34 to 42 inches; strong brown (7.5YR 4/6) silt loam, dark brown (7.5YR 3/4) moist; weak medium prismatic structure parting to strong fine and medium subangular blocky; hard, friable, moderately sticky and slightly plastic; common very fine and few fine and medium roots; few very fine irregular pores and many



very fine and few fine tubular pores; many faint clay films on faces of peds and in pores; few faint skeletons on faces of peds; trace amount of fine mica flakes; very strongly acid (pH 4.8); abrupt wavy boundary.

2Bt4—42 to 56 inches; strong brown (7.5YR 4/6) very cobbly sandy clay loam, strong brown (7.5YR 4/6) moist; moderate fine, medium, and coarse subangular blocky structure; hard, friable, moderately sticky and slightly plastic; few very fine and fine roots; many very fine irregular pores and many very fine and few fine tubular pores; many distinct brown (7.5YR 5/4) clay films on faces of peds and in pores; 5 percent fine mica flakes; 20 percent gravel and 15 percent cobbles; very strongly acid (pH 4.8); clear wavy boundary.

2Bt5—56 to 62 inches; reddish yellow (7.5YR 6/6) very cobbly loam, strong brown (7.5YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine irregular pores and common very fine and few fine tubular pores; many prominent dark reddish brown (5YR 3/4) clay films on faces of peds; 5 percent fine mica flakes; 25 percent gravel, 20 percent cobbles, and 3 percent stones; very strongly acid (pH 4.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 21 inches

### ***Hucberit Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or schist

*Slope range:* 15 to 70 percent

*Elevation:* 4,300 to 5,800 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

*Taxonomic class:* Medial over loamy, amorphic over isotic Typic Haplocryands

### ***Typical Pedon***

Hucberit medial silt loam, 15 to 40 percent slopes, about 5 miles northeast of Elk River, Idaho; about 1,800 feet south and 2,500 feet east of the northwest corner of section 5, T. 40 N., R. 3 E.; latitude 46 degrees, 50 minutes, 36 seconds north and longitude 116 degrees, 6 minutes, 37 seconds west; U.S. Geological Survey Elk Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 6 inches; brown (10YR 4/3) medial silt loam, very dark brown (7.5YR 2.5/2) moist; moderate medium and coarse granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium roots; many very fine, common fine, and few medium irregular pores; very strongly acid (pH 5.0); abrupt wavy boundary.

Bw1—6 to 14 inches; dark yellowish brown (10YR 4/4) medial silt loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, common fine, and few medium and coarse roots; many very fine, common fine and medium, and few

coarse irregular pores; 1 percent gravel; strongly acid (pH 5.1); clear wavy boundary.

Bw2—14 to 21 inches; yellowish brown (10YR 5/4) medial silt loam, dark yellowish brown (10YR 3/4) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine, medium, and coarse roots; common very fine and fine and few medium irregular pores and few very fine tubular pores; 1 percent gravel; strongly acid (pH 5.2); abrupt wavy boundary.

2Bw3—21 to 28 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 3/6) moist; weak very fine, fine, and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; common very fine and few fine irregular pores and few very fine tubular pores; 5 percent fine mica flakes; 15 percent gravel and 5 percent cobbles; very strongly acid (pH 4.7); clear wavy boundary.

2Bw4—28 to 36 inches; very pale brown (10YR 7/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak very fine, fine, and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; common very fine tubular and irregular pores; 5 percent fine mica flakes; 15 percent gravel; very strongly acid (pH 4.6); clear wavy boundary.

2BC—36 to 48 inches; pale yellow (2.5Y 7/4) gravelly sandy loam, brownish yellow (10YR 6/6) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and few fine tubular pores and few very fine and fine irregular pores; 10 percent fine mica flakes; 15 percent gravel; very strongly acid (pH 4.9); clear wavy boundary.

3C—48 to 62 inches; very pale brown (10YR 8/2) loamy coarse sand, very pale brown (10YR 7/4) moist; massive; few very fine roots; common very fine and few fine pores; 5 percent fine mica flakes; 10 percent gravel; very strongly acid (pH 4.9).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 28 inches

## ***Hugus Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Foothills, mountains

*Landform:* Hills, mountain slopes

*Parent material:* Volcanic ash over tertiary alluvium and/or colluvium derived from metasedimentary rock

*Slope range:* 15 to 75 percent

*Elevation:* 1,800 to 4,900 feet

*Mean annual precipitation:* 30 to 55 inches

*Mean annual air temperature:* 38 to 45 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy-skeletal, amorphic over isotic, frigid Alfic Udivitrands

### ***Typical Pedon***

Hugus ashy silt loam ([fig. 15](#)) in an area of Hugus, moist-Hugus complex, 35 to 75 percent slopes, about 8.5 miles northeast of Bovill, Idaho; about 1,500 feet north and



**Figure 15.—Typical profile of a Hugus soil. The volcanic ash mantle is between depths of 2 and 17 inches (A and Bw horizons). The ochric epipedon is between depths of 2 and 6 inches (A horizon). The cambic horizon is between depths of 6 and 17 inches (Bw horizon). The argillic horizon is between depths of 17 and 62 inches (2Bt horizon). The particle-size control section is between depths of 2 and 42 inches (A, Bw, and 2Bt horizons).**

2,000 feet west of the southeast corner of section 21, T. 41 N., R. 2 E.; latitude 46 degrees, 52 minutes, 53 seconds north and longitude 116 degrees, 12 minutes, 42 seconds west; U.S. Geological Survey Anthony Peak Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 3 inches; moderately decomposed plant material.

A—3 to 7 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/3) moist; weak fine and very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine and medium roots; many very fine, common fine and medium, and few coarse irregular pores; 2 percent gravel; strongly acid (pH 5.2); clear wavy boundary.

- Bw1—7 to 15 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure parting to moderate fine and very fine granular; soft, very friable, nonsticky and nonplastic; many very fine and common fine, medium, and coarse roots; many very fine, common fine, and few medium and coarse irregular pores; 5 percent gravel; strongly acid (pH 5.4); clear wavy boundary.
- Bw2—15 to 19 inches; yellowish brown (10YR 5/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine, medium, and coarse roots; many very fine, common fine, and few medium irregular pores; 10 percent gravel; moderately acid (pH 5.6); abrupt wavy boundary.
- 2Bt1—19 to 26 inches; yellowish brown (10YR 5/4) very gravelly loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine irregular pores and many very fine and few fine tubular pores; few faint clay films in pores; 1 percent fine mica flakes; 30 percent gravel, 10 percent cobbles, and 5 percent stones; moderately acid (pH 5.8); clear wavy boundary.
- 2Bt2—26 to 32 inches; light yellowish brown (10YR 6/4) very gravelly loam, yellowish brown (10YR 5/4) moist; weak very fine, fine, and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; common very fine irregular pores and many very fine and few fine tubular pores; few faint clay films in pores; 3 percent fine mica flakes; 45 percent gravel and 10 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.
- 2Bt3—32 to 40 inches; very pale brown (10YR 7/4) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak very fine, fine, and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; few very fine and fine irregular pores and many very fine and few fine tubular pores; few faint clay films in pores; 3 percent fine mica flakes; 45 percent gravel and 15 percent cobbles; moderately acid (pH 6.0); gradual wavy boundary.
- 2BC—40 to 51 inches; very pale brown (10YR 7/4) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and fine irregular pores and few very fine tubular pores; few faint clay bridges; 5 percent fine mica flakes; 45 percent gravel and 10 percent cobbles; moderately acid (pH 6.0); gradual wavy boundary.
- 2C—51 to 60 inches; very pale brown (10YR 7/4) very gravelly sandy loam, dark yellowish brown (10YR 4/6) moist; massive; few very fine roots; common very fine and few fine irregular pores; 2 percent fine mica flakes; 40 percent gravel and 10 percent cobbles; moderately acid (pH 5.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 23 inches

### ***Itzee Series***

*Depth class:* Very deep

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* High

*Landscape:* Canyonlands

*Landform:* Terraces



## Soil Survey of Clearwater Area, Idaho

*Parent material:* Mixed alluvium

*Slope range:* 0 to 12 percent

*Elevation:* 920 to 2,800 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Sandy, mixed, mesic Cumulic Ultic Haploxerolls

### **Typical Pedon**

Itzee sandy loam, 0 to 12 percent slopes, about 1 mile southwest of Ahsahka, Idaho; about 200 feet north and 1,000 feet west of the southeast corner of section 33, T. 37 N., R. 1 E.; latitude 46 degrees, 30 minutes, 3 seconds north and longitude 116 degrees, 19 minutes, 46 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 4 inches; dark grayish brown (10YR 4/2) sandy loam, very dark gray (10YR 3/1) moist; weak fine subangular blocky structure parting to moderate fine granular; slightly hard, friable, nonsticky and nonplastic; many very fine and fine roots; many very fine irregular pores; 5 percent gravel; neutral (pH 7.2); clear smooth boundary.

Bw—4 to 12 inches; dark grayish brown (10YR 4/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine and common fine and coarse roots; many very fine irregular pores; 5 percent gravel; neutral (pH 7.1); clear smooth boundary.

C1—12 to 27 inches; brown (10YR 4/3) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; common very fine irregular pores; 10 percent gravel; neutral (pH 6.6); gradual wavy boundary.

C2—27 to 47 inches; brown (10YR 4/3) loamy fine sand, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots; few very fine irregular pores; 10 percent gravel; slightly acid (pH 6.4); abrupt smooth boundary.

C3—47 to 60 inches; pale brown (10YR 6/3) extremely cobbly fine sand, dark yellowish brown (10YR 3/4) moist; massive; loose, nonsticky and nonplastic; few fine and medium roots; many very fine and fine irregular pores; 30 percent gravel and 35 percent cobbles; slightly acid (pH 6.4).

### **Range in Characteristics**

*Thickness of mollic epipedon:* 7 to 14 inches

### **Jacket Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands, plateaus

*Landform:* Hills, structural benches

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 3 to 35 percent

*Elevation:* 1,200 to 4,300 feet

*Mean annual precipitation:* 18 to 26 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine, smectitic, mesic Pachic Ultic Argixerolls

### **Typical Pedon**

Jacket silt loam, 12 to 30 percent slopes, about 2 miles east of Orofino, Idaho; about 700 feet north and 550 feet west of the southeast corner of section 4, T. 36 N., R. 2 E.; latitude 46 degrees, 29 minutes, 15 seconds north and longitude 116 degrees, 12 minutes, 10 seconds west; U.S. Geological Survey Orofino East Quadrangle.

Oe—0 to 2 inches; slightly decomposed plant material.

A1—2 to 5 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine and fine roots; many very fine and fine irregular pores; neutral (pH 7.0); clear smooth boundary.

A2—5 to 10 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine, fine, and medium roots; many very fine irregular pores and common very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

A3—10 to 16 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine and many medium and coarse roots; many very fine and fine irregular pores and common very fine tubular pores; neutral (pH 6.6); gradual smooth boundary.

AB—16 to 33 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine to coarse roots; common very fine tubular and irregular pores; slightly acid (pH 6.5); clear wavy boundary.

Bt1—33 to 46 inches; yellowish brown (10YR 5/4) silty clay, dark yellowish brown (10YR 3/4) moist; strong medium subangular blocky structure; very hard, firm, very sticky and very plastic; few very fine and fine and common medium roots; common very fine irregular and tubular pores; common distinct clay films on faces of peds; few quartz sand grains; 2 percent gravel and 5 percent cobbles; slightly acid (pH 6.5); clear wavy boundary.

Bt2—46 to 64 inches; dark yellowish brown (10YR 4/4) silty clay, dark yellowish brown (10YR 3/4) moist; moderate coarse subangular blocky structure parting to strong medium subangular blocky; very hard, very firm, very sticky and very plastic; few very fine, fine, and medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds; few quartz sand grains; 7 percent cobbles; slightly acid (pH 6.5).

### **Range in Characteristics**

*Thickness of mollic epipedon:* 20 to 35 inches

### **Taxadjunct Features**

The Jacket soils in detailed soil map units 116 and 167 in this survey area are a taxadjunct to the Jacket series because the base saturation is more than 75 percent throughout the subsoil. These soils are classified as fine, smectitic, mesic Pachic Argixerolls. The Jacket soil in map unit 85 is also outside the range of the Jacket series because the mean annual precipitation is as low as 18 inches. These differences do not affect use and management.



## **Jacot Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Foothills

*Landform:* Hills

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 65 percent

*Elevation:* 2,200 to 4,400 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over isotic, frigid Alfic Udivitrands

### **Typical Pedon**

Jacot ashy silt loam in an area of Jacot ashy silt loam, 35 to 65 percent slopes; Shoshone County, Idaho; St. Joe Area, Parts of Benewah and Shoshone Counties, Idaho, soil survey area; about 2 miles west of Marble Creek, Idaho; about 2,000 feet north and 1,500 feet east of the southwest corner of section 10, T. 45 N., R. 3 E.; latitude 47 degrees, 15 minutes, 31 seconds north and longitude 116 degrees, 4 minutes, 6 seconds west; U.S. Geological Survey Marble Creek Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 6 inches; pale brown (10YR 6/3) ashy silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure parting to moderate fine granular; soft, very friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine tubular pores; 10 percent gravel; slightly acid (pH 6.5); clear wavy boundary.

Bw—6 to 16 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, common fine and medium, and few coarse roots; common very fine and fine tubular pores; 10 percent gravel; neutral (pH 6.8); abrupt wavy boundary.

2Bt—16 to 22 inches; very pale brown (10YR 7/4) gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; common very fine tubular pores and many very fine and fine irregular pores; few faint clay films on faces of peds and lining pores; 20 percent gravel; strongly acid (pH 5.5); clear wavy boundary.

2Bt2—22 to 42 inches; pale yellow (2.5Y 7/4) gravelly sandy loam, light olive brown (2.5Y 5/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; few very fine, fine, and medium roots; many very fine and fine irregular pores; few faint clay films on faces of peds and lining pores; 25 percent gravel; strongly acid (pH 5.5); clear wavy boundary.

2C1—42 to 50 inches; pale yellow (2.5Y 8/4) gravelly loamy sand, light yellowish brown (2.5Y 6/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; many very fine and fine irregular pores; 30 percent gravel; moderately acid (pH 5.7); gradual wavy boundary.

2C2—50 to 62 inches; pale yellow (2.5Y 8/4) very gravelly loamy sand, light yellowish brown (2.5Y 6/4) moist; massive; loose, nonsticky and nonplastic; few very fine roots; many very fine and fine irregular pores; 45 percent gravel; moderately acid (pH 5.7).

***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 18 inches

***Jaype Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits

*Slope range:* 5 to 45 percent

*Elevation:* 3,000 to 3,550 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, mixed, active, frigid Andic Hapludalfs

***Typical Pedon***

Jaype ashy silt loam ([fig. 16](#)) in an area of Jaype-Revling complex, 5 to 40 percent slopes, about 4 miles east of Grangemont, Idaho; about 2,400 feet north and 2,200 feet east of the southwest corner of section 21, T. 37 N., R. 4 E.; latitude 46 degrees, 32 minutes, 4 seconds north and longitude 115 degrees, 57 minutes, 41 seconds west; U.S. Geological Survey Whiskey Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

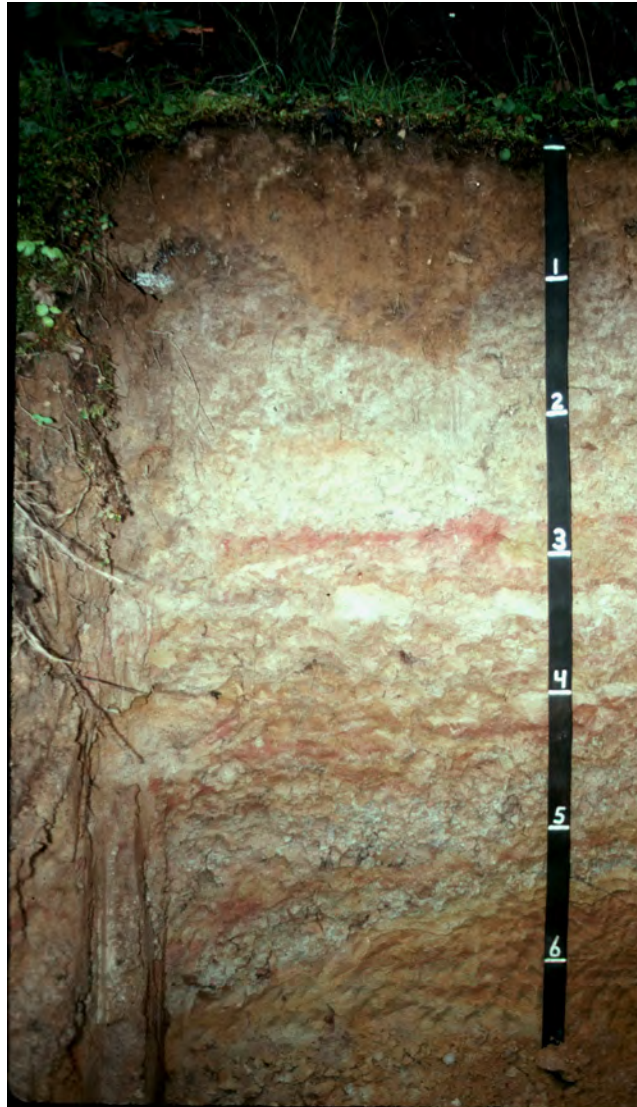
A—2 to 5 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine, common fine and medium, and few coarse roots throughout; many very fine and common fine and medium irregular pores; 5 percent fine and medium rounded iron-manganese concretions; moderately acid (pH 6.0); clear wavy boundary.

Bw—5 to 14 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, common fine, and few coarse and very coarse roots throughout; many very fine and few fine irregular pores; 5 percent fine rounded iron-manganese concretions; moderately acid (pH 6.0); abrupt wavy boundary.

2Bt1—14 to 18 inches; light brown (7.5YR 6/3) loam, reddish brown (5YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine, medium, and coarse roots throughout; many very fine and few fine tubular pores and few very fine irregular pores; few faint clay films lining pores; moderately acid (pH 5.6); clear wavy boundary.

2Bt2—18 to 26 inches; very pale brown (10YR 7/3) loam, brown (7.5YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine and fine and few medium roots throughout; many very fine and common fine tubular pores; common faint clay films lining pores; 1 percent gravel; moderately acid (pH 5.8); abrupt wavy boundary.

3Btb—26 to 35 inches; very pale brown (10YR 8/3) and yellow (10YR 7/6) silty clay loam, pale yellow (2.5Y 7/3) and brown (7.5YR 5/4) moist; weak medium prismatic structure parting to strong fine and medium subangular blocky; very hard, firm,



**Figure 16.—Typical profile of a Jayne soil. The volcanic ash mantle and the ochric epipedon are between depths of 2 and 14 inches (A and Bw horizons). The cambic horizon is between depths of 5 and 14 inches (Bw horizon). The argillic horizon is between depth of 14 and 35 inches (2Bt and 3Btb horizons). Particle-size control section is between depths of 14 and 34 inches (2Bt horizon and part of the 3Btb horizon).**

moderately sticky and moderately plastic; common very fine and fine and few medium roots throughout; common very fine tubular pores and few very fine irregular pores; many distinct clay films on faces of peds and in pores; strongly acid (pH 5.2); abrupt wavy boundary.

3B/C—35 to 60 inches; multicolored red (10R 5/6) to reddish yellow (7.5YR 6/8), stratified material with texture ranging from coarse sand to silty clay loam, red (10R 4/6) to strong brown (7.5YR 5/8) moist; single grain to weak coarse prismatic structure parting to strong fine and medium subangular blocky in some areas; loose to hard, loose to firm, nonsticky to moderately sticky and nonplastic to moderately plastic; common very fine and few fine and medium roots along faces

of peds; common very fine tubular pores and few very fine irregular pores; many distinct clay films on faces of peds and in pores; 10 percent angular iron-cemented fragments, 7 percent gravel, and 3 percent cobbles; very strongly acid and strongly acid (pH 4.6 to 5.4); abrupt wavy boundary.

3Btb'—60 to 72 inches; light brown (7.5YR 6/4) and pinkish white (7.5YR 8/2) clay, strong brown (7.5YR 5/6) and pinkish gray (5YR 7/2) moist; strong medium angular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few very fine and fine roots along faces of peds; few very fine tubular pores and few very fine and fine irregular pores; many distinct clay films on faces of peds and in pores; very strongly acid (pH 5.0); abrupt smooth boundary.

3C—72 to 82 inches; brownish yellow (10YR 6/6) sandy loam, yellowish brown (10YR 5/8) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine irregular pores; 60 percent of horizon is very weakly cemented with iron; very strongly acid (pH 4.6).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 8 to 12 inches

## ***Joel Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Loess

*Slope range:* 5 to 20 percent

*Elevation:* 1,200 to 3,500 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Alfic Argixerolls

### ***Typical Pedon***

Joel silt loam ([fig. 17](#)) in an area of Joel-Setters complex, 5 to 20 percent slopes, about 1 mile south and 2 miles east of Orofino, Idaho; about 660 feet south and 470 feet west of the northeast corner of section 16, T. 36 N., R. 2 E.; latitude 46 degrees, 28 minutes, 6 seconds north and longitude 116 degrees, 12 minutes, 16 seconds west; U.S. Geological Survey Orofino East Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A1—1 to 5 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; moderate medium granular structure; slightly hard, friable, slightly sticky and moderately plastic; many very fine, fine, and medium roots; many very fine tubular pores; neutral (pH 7.0); clear wavy boundary.

A2—5 to 11 inches; grayish brown (10YR 5/2) silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to moderate medium granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine tubular pores; neutral (pH 6.8); clear wavy boundary.

A3—11 to 16 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine and fine tubular pores; slightly acid (pH 6.5); clear smooth boundary.





**Figure 17.—Typical profile of a Joel soil. The mollic epipedon extends from the surface of the mineral soil material to a depth of 16 inches (A and AB horizons). The alfic feature is between depths of 16 and 27 inches (B/E horizon). The argillic horizon is between depths of 27 and 61 inches (Btc horizon). The particle-size control section is between depths of 27 and 47 inches (Btc1 horizon and part of Btc2 horizon).**

BA—16 to 27 inches; brown (10YR 5/3) silt loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; many very fine and fine tubular pores; few faint clay films on faces of peds; slightly acid (pH 6.5); clear wavy boundary.

B/E—27 to 40 inches; B material is brown (10YR 5/3) silty clay loam, brown (10YR 4/3) moist, and E material is light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; weak fine prismatic structure parting to moderate fine subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine, fine, and medium roots; many very fine and fine tubular pores; common distinct clay films

on faces of peds and in pores; many silt coatings on faces of peds and pockets of albic material; moderately acid (pH 6.0); clear smooth boundary.

Btb1—40 to 50 inches; brown (7.5YR 5/4) silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine prismatic structure parting to strong fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots between prisms; many very fine and fine and few medium tubular pores; many prominent clay films on faces of peds and in pores; common silt coatings on faces of peds; moderately acid (pH 5.8); clear wavy boundary.

Btb2—50 to 61 inches; yellowish brown (10YR 5/4) silty clay loam, weak medium prismatic structure parting to moderate very fine, fine, and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots between prisms; common very fine and fine and few medium tubular pores; common distinct and few prominent clay films on faces of peds and in pores; common silt coatings on faces of peds; moderately acid (pH 5.8).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 19 inches

## ***Johnson Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands

*Landform:* Canyons, structural benches

*Parent material:* Loess and/or colluvium over residuum derived from gneiss and/or granite

*Slope range:* 20 to 75 percent

*Elevation:* 1,000 to 3,000 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Ultic Argixerolls

### ***Typical Pedon***

Johnson loam, 45 to 65 percent slopes, about 1 mile south and 1 mile east of Greer, Idaho; about 1,350 feet south and 1,150 feet west of the northeast corner of section 14, T. 35 N., R. 2 E.; latitude 46 degrees, 22 minutes, 47 seconds north and longitude 116 degrees, 9 minutes, 48 seconds west; U.S. Geological Survey Orofino East Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 12 inches; brown (10YR 4/3) loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine, fine, medium, and coarse roots; many very fine and common fine irregular pores; 5 percent gravel; neutral (pH 7.0); clear smooth boundary.

Bt1—12 to 22 inches; grayish brown (10YR 5/4) loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common very fine, fine, medium, and coarse roots; many very fine irregular pores and common fine tubular pores; common faint clay films in pores; 5 percent gravel; neutral (pH 6.8); gradual wavy boundary.

Bt2—22 to 33 inches; grayish brown (10YR 5/4) clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, firm, moderately sticky



and moderately plastic; common very fine, fine, and medium roots; common very fine irregular pores and many very fine and common fine tubular pores; common patchy distinct clay films on faces of peds and common faint clay films in pores; 5 percent clean silt coatings; 1/8-inch-thick clay bands; 5 percent gravel; slightly acid (pH 6.5); clear wavy boundary.

Bt3—33 to 54 inches; grayish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/6) moist; weak fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine, fine, medium, and coarse roots; many very fine and common fine tubular pores; common patchy distinct clay films on faces of peds and in pores; 10 percent patchy clean silt coatings; 10 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

Cr—54 inches; weathered granite.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 20 inches

*Depth to weathered bedrock:* 40 to 60 inches

### ***Judgetown Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Volcanic ash over residuum derived from granite and/or gneiss

*Slope range:* 35 to 75 percent

*Elevation:* 2,000 to 5,000 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over isotic, frigid Typic Udivitrands

### ***Typical Pedon***

Judgetown ashy loam in an area of Dullaxe-Brodeer complex, 10 to 40 percent slopes, about 2 miles northwest of Pierce, Idaho; about 200 feet south and 200 feet west of the northeast corner of section 32, T. 37 N., R. 5 E.; latitude 46 degrees, 30 minutes, 47 seconds north and longitude 115 degrees, 50 minutes, 38 seconds west; U.S. Geological Survey Jaype Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 4 inches; brown (7.5YR 4/2) ashy loam, dark brown (7.5YR 3/2) moist; weak very fine and fine granular structure; very soft, very friable, nonsticky and nonplastic; many fine and medium and few coarse roots; many very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; moderately acid (pH 5.8); clear smooth boundary.

Bw1—4 to 17 inches; light yellowish brown (10YR 6/4) ashy loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; many very fine and fine irregular pores; 5 percent fine rounded iron-manganese concretions; slightly acid (pH 6.3); abrupt wavy boundary.

2Bw2—17 to 22 inches; brown (10YR 5/3) sandy loam, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; slightly

## Soil Survey of Clearwater Area, Idaho

hard, friable, slightly sticky and slightly plastic; common fine and medium and few coarse roots; common very fine and fine irregular pores and few medium tubular pores; 2 percent fine mica flakes; 3-inch-wide krotovina filled with volcanic ash; slightly acid (pH 6.3); clear wavy boundary.

2Bw3—22 to 30 inches; brown (10YR 5/3) sandy loam, dark brown (10YR 4/3) moist; moderate fine and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common fine and medium roots; common very fine and fine irregular pores and few very fine tubular pores; 2 percent fine mica flakes; 5 percent gravel; slightly acid (pH 6.1); clear smooth boundary.

2BC—30 to 36 inches; yellowish brown (10YR 5/4) loamy sand, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine irregular pores; 3 percent fine mica flakes; 10 percent gravel; slightly acid (pH 6.3); gradual smooth boundary.

2C—36 to 52 inches; light yellowish brown (2.5Y 6/3) loamy coarse sand, light olive brown (2.5Y 5/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots throughout and few coarse roots in cracks; few very fine irregular pores; 5 percent fine mica flakes; slightly acid (pH 6.2); clear smooth boundary.

2Cr—52 inches; weathered granitic rock.

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 32 inches

*Depth to weathered bedrock:* 40 to 60 inches

### ***Jury Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from gneiss and/or granite

*Slope range:* 5 to 65 percent

*Elevation:* 3,000 to 5,200 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over isotic, frigid Typic Udivitrands

### ***Typical Pedon***

Jury medial silt loam, 30 to 65 percent slopes, about 7 miles northeast of Pierce, Idaho; about 1,800 feet south and 2,400 feet east of the northwest corner of section 17, T. 37 N., R. 6 E.; latitude 46 degrees, 33 minutes, 7 seconds north and longitude 115 degrees, 46 minutes, 56 seconds west; U.S. Geological Survey French Mountain Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 6 inches; brown (10YR 5/3) medial silt loam, dark brown (7.5YR 3/2) moist; weak very fine, fine, and medium granular structure; soft, very friable, slightly sticky and nonplastic; many very fine, fine, and medium roots; many very fine to coarse tubular and irregular pores; 3 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

- Bw1—6 to 29 inches; pale brown (10YR 6/3) medial silt loam, dark brown (10YR 3/3) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine to coarse roots; common very fine and fine tubular and irregular pores; 3 percent iron concretions; 3 percent mica flakes; 5 percent gravel; moderately acid (pH 6.0); abrupt wavy boundary.
- 2Bw2—29 to 48 inches; very pale brown (10YR 7/3) sandy loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine to coarse roots; common very fine and fine tubular and irregular pores; 5 percent gravel; moderately acid (pH 5.6); gradual wavy boundary.
- 2C—48 to 62 inches; very pale brown (10YR 7/3) loamy sand, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, nonsticky and nonplastic; common fine roots; common very fine and fine tubular pores; 10 percent gravel; few faint clay films lining pores; strongly acid (pH 5.4).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 27 inches

### ***Kauder Series***

*Depth class:* Moderately deep to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Canyonlands, plateaus

*Landform:* Hillslopes; ridges, some of which are on hillslopes and structural benches

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 30 percent

*Elevation:* 1,600 to 3,800 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-silty, mixed, active, frigid Andic Fragiudalfs

### ***Typical Pedon***

Kauder ashy silt loam ([fig. 18](#)) in an area of Grangemont-Kauder complex, 5 to 20 percent slopes, about 3 miles north and 2 miles east of Weippe, Idaho; about 1,750 feet south and 1,700 feet west of the northeast corner of section 36, T. 36 N., R. 4 E.; latitude 46 degrees, 25 minutes, 20 seconds north and longitude 115 degrees, 53 minutes, 48 seconds west; U.S. Geological Survey Weippe North Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 4 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 4/4) moist; weak thin platy structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; neutral (pH 6.9); clear smooth boundary.

Bw1—4 to 7 inches; brown (7.5YR 5/4) ashy silt loam, brown (7.5YR 4/4) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few coarse roots; many very fine and fine irregular pores; neutral (pH 6.9); clear smooth boundary.

Bw2—7 to 15 inches; yellowish brown (10YR 5/6) ashy silt loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many medium and coarse and



**Figure 18.—Typical profile of a Kauder soil. The volcanic ash mantle is between depths of 3 and 15 inches (A and Bw horizons). The ochric epipedon is between depths of 3 and 15 inches (A and Bw horizons). The argillic horizon is between depths of 23 and 95 inches (2Bt/E, 3Btx1, 3Btx2, 4Btx1, 4Btx2, and 4Btx3 horizons). The fragipan is between depths of 34 and 95 inches (3Btx1, 3Btx2, 4Btx1, 4Btx2, and 4Btx3 horizons). The particle-size control section is between depths of 23 and 34 inches (2Bt/E horizon).**

common very fine and fine roots; many very fine, common fine, and few medium tubular pores; neutral (pH 6.7); abrupt wavy boundary.

2E—15 to 23 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/4) moist; weak thin platy structure; slightly hard, friable, slightly sticky and moderately



- plastic; many medium, fine, and very fine and few coarse roots; many very fine and few fine tubular pores; moderately acid (pH 5.7); clear wavy boundary.
- 2B/E—23 to 34 inches; Bt part is yellowish brown (10YR 5/4) silt loam, dark yellowish brown (10YR 4/4) moist, and E part is light gray (10YR 7/2) silt loam, yellowish brown (10YR 5/4) moist; moderate medium prismatic structure parting to moderate medium angular blocky; hard, firm, moderately sticky and moderately plastic; many medium and few very fine and fine roots; many fine and very fine and few medium tubular pores; yellowish brown (10YR 5/6) continuous distinct clay films on faces of peds and lining pores; very strongly acid (pH 4.8); clear smooth boundary.
- 3Btx1—34 to 42 inches; brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 4/4) moist; strong coarse prismatic structure parting to strong coarse subangular blocky; extremely hard and brittle when moist, slightly sticky and slightly plastic; many fine and medium and few very fine roots, some of which are flattened; roots in tongues of E material and flattened root mats on tops of prisms; many very fine and fine and few medium vesicular pores; 15 percent of horizon has 0.25- to 1.00-inch-thick tongues of E material that are very pale brown (10YR 8/2), pale brown (10YR 6/3) moist, and are between faces of prisms; continuous distinct clay films on faces of peds and continuous prominent clay films lining pores; iron stains on faces of peds between E and B material; very strongly acid (pH 4.5); clear wavy boundary.
- 3Btx2—42 to 49 inches; brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 4/4) moist; strong coarse prismatic structure; extremely hard, very firm, brittle, moderately sticky and moderately plastic; root mats on tops of prisms and flattened roots; dark organic stains on all surfaces of peds; many very fine and fine and few medium tubular pores; continuous prominent clay films lining pores and on horizontal surfaces and continuous distinct clay films on vertical surfaces; less than 5 percent E material by volume in pockets; iron stains on faces of peds between B and E material; very strongly acid (pH 4.7); abrupt smooth boundary.
- 3Btx3—49 to 63 inches; brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 4/4) moist; strong thick platy structure; extremely hard, extremely firm and brittle, very sticky and very plastic; dark-colored root mats on horizontal and vertical surfaces of plates; many very fine and fine and few medium tubular pores; dark organic stains on all faces of peds; continuous prominent clay films on horizontal surfaces and lining pores and continuous distinct clay films on vertical surfaces; less than 5 percent E material by volume coating peds and in pockets; iron stains on faces of peds between B and E material; very strongly acid (pH 4.5); clear smooth boundary.
- 3Btx4—63 to 77 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 4/4) moist; strong medium and thick platy structure; very hard, very firm and brittle when moist, very sticky and very plastic; relict flattened fine roots between surfaces of peds; many fine and very fine and few medium tubular pores; continuous prominent clay films lining pores and on horizontal surfaces and continuous distinct clay films on vertical surfaces; very strongly acid (pH 4.5); clear smooth boundary.
- 3Btx5—77 to 95 inches; light brown (7.5YR 6/4) silt loam, brown (7.5YR 5/4) moist; strong thick platy structure; extremely hard, very firm and brittle when moist, moderately sticky and moderately plastic; relict flattened fine roots between surfaces of peds; many fine and very fine and few medium vesicular and tubular pores; continuous prominent clay films on faces of peds and lining pores; thin coating of clean sand and silt grains on surface of clay films; strongly acid (pH 5.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle: 7 to 14 inches*

*Depth to seasonal high perched water table:* 14 to 28 inches in February through June

*Depth to the fragipan:* 22 to 45 inches

## **Keeler Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Foothills, mountains

*Landform:* Hills, mountain slopes

*Parent material:* Volcanic ash and/or loess over colluvium derived from granite

*Slope range:* 10 to 75 percent

*Elevation:* 1,600 to 4,710 feet

*Mean annual precipitation:* 30 to 65 inches

*Mean annual air temperature:* 38 to 45 degrees F

*Frost-free period:* 50 to 125 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Vitrandic Hapludalfs

### **Typical Pedon**

Keeler ashy loam in an area of Keeler, moist-Keeler complex, 35 to 75 percent slopes, about 7 miles north and 12.5 miles east of Elk River, Idaho; about 1,500 feet south and 3,000 feet west of the northeast corner of section 24, T. 41 N., R. 4 E.; latitude 46 degrees, 53 minutes, 12 seconds north and longitude 115 degrees, 54 minutes, 6 seconds west; U.S. Geological Survey Pinchot Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 5 inches; brown (7.5YR 4/3) ashy loam, dark brown (7.5YR 3/3) moist; moderate fine and medium granular structure; soft, friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots throughout; many very fine and fine irregular pores; 5 percent fine mica flakes; 2 percent gravel; moderately acid (pH 6.0); abrupt wavy boundary.

BA—5 to 12 inches; brown (7.5YR 5/4) ashy loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; many very fine and fine roots on faces of peds and common medium roots throughout; many very fine irregular pores and common fine and medium tubular pores; 10 percent fine mica flakes; 2 percent gravel; moderately acid (pH 5.8); abrupt wavy boundary.

Bt1—12 to 21 inches; brown (7.5YR 5/3) loam, dark brown (7.5YR 3/4) moist; moderate fine, medium, and coarse subangular blocky structure; hard, firm, slightly sticky and moderately plastic; common very fine and fine roots on faces of peds and few medium and coarse roots throughout; few distinct clay films in pores; common faint skeletalans on faces of peds and in pores; common faint very pale brown (10YR 8/2) coatings in pores; 10 percent fine mica flakes; 2 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

Bt2—21 to 39 inches; yellowish brown (10YR 5/4) loam, strong brown (7.5YR 4/6) moist; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and moderately plastic; common very fine and fine roots on faces of peds and few coarse roots throughout; many very fine irregular pores and few fine and coarse tubular pores; few distinct clay films on faces of peds and in pores; many faint skeletalans on faces of peds and in pores; many distinct very pale brown (10YR 8/2) coatings in pores; 10 percent fine mica flakes; 5 percent gravel; moderately acid (pH 5.8); abrupt wavy boundary.



- 2Bt3—39 to 48 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; common very fine roots between peds; many very fine and fine irregular pores; few faint clay films on faces of peds and in pores; common faint skeletal on faces of peds and in pores; common faint very pale brown (10YR 8/2) coatings in pores; 10 percent fine mica flakes; 20 percent paragravel and 5 percent gravel; moderately acid (pH 5.8); abrupt wavy boundary.
- 2C1—48 to 66 inches; brownish yellow (10YR 6/6) gravelly loam, yellowish brown (10YR 5/6) moist; massive; slightly hard, friable, slightly sticky and moderately plastic; common very fine roots in cracks and few medium roots throughout; many very fine and fine irregular pores and few fine and medium tubular pores; few distinct iron-manganese stains throughout; 5 percent fine mica flakes; 15 percent paragravel and 5 percent gravel; moderately acid (pH 5.7); clear wavy boundary.
- 2C2—66 to 74 inches; brownish yellow (10YR 6/6) gravelly sandy loam, yellowish brown (10YR 5/8) moist; massive; slightly hard, friable, slightly sticky and nonplastic; common very fine and fine roots in cracks and few medium roots throughout; common very fine irregular pores; trace amount of fine mica flakes; 15 percent gravel; moderately acid (pH 5.6).

### ***Kettenbach Series***

*Depth class:* Moderately deep to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, rims

*Parent material:* Loess and colluvium derived from basalt

*Slope range:* 10 to 90 percent

*Elevation:* 1,000 to 3,300 feet

*Mean annual precipitation:* 22 to 32 inches

*Mean annual air temperature:* 40 to 52 degrees F

*Frost-free period:* 80 to 180 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Pachic Argixerolls

### ***Typical Pedon***

Kettenbach gravelly silt loam in an area of Gwin-Kettenbach complex, 35 to 75 percent slopes, about 4 miles north of Woodland, Idaho; about 1,400 feet south and 1,900 feet west of the northeast corner of section 22, T. 35 N., R. 3 E.; latitude 46 degrees, 21 minutes, 54 seconds north and longitude 116 degrees, 3 minutes, 57 seconds west; U.S. Geological Survey Woodland Quadrangle.

- A—0 to 3 inches; brown (10YR 4/3) gravelly silt loam, very dark brown (10YR 2/2) moist; weak fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few coarse roots; many very fine and fine irregular pores; 15 percent gravel; slightly acid (pH 6.4); clear smooth boundary.
- AB—3 to 11 inches; brown (10YR 4/3) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure parting to weak very fine and fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; 35 percent gravel and 5 percent cobbles; slightly acid (pH 6.1); gradual wavy boundary.

- Bt1—11 to 21 inches; brown (10YR 4/3) very cobbly silty clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure parting to moderate very fine and fine granular; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium and coarse roots; common very fine and fine irregular pores; few distinct clay films on faces of peds; 25 percent gravel and 30 percent cobbles; slightly acid (pH 6.3); clear wavy boundary.
- Bt2—21 to 36 inches; dark yellowish brown (10YR 4/4) very cobbly silty clay loam, dark brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; common very fine tubular pores; common prominent clay films lining pores and on faces of peds; 20 percent gravel and 40 percent cobbles; moderately acid (pH 6.0); abrupt wavy boundary.
- R—36 inches; fractured basalt.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 20 to 30 inches

*Depth to basalt:* 20 to 40 inches

### ***Keuterville Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, hillslopes, structural benches

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 10 to 90 percent

*Elevation:* 1,000 to 4,200 feet

*Mean annual precipitation:* 18 to 28 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Ultic Argixerolls

### ***Typical Pedon***

Keuterville gravelly silt loam, 25 to 50 percent slopes, about 3 miles south and 7 miles east of Orofino, Idaho; about 1,400 feet south and 2,400 feet west of the northeast corner of section 29, T. 36 N., R. 3 E.; latitude 46 degrees, 26 minutes, 18 seconds north and longitude 116 degrees, 6 minutes, 39 seconds west; U.S. Geological Survey Rudo Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A1—2 to 11 inches; dark yellowish brown (10YR 4/4) gravelly silt loam, dark brown (7.5YR 3/2) moist; weak fine subangular blocky structure parting to weak very fine and fine granular; soft, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine irregular pores; 20 percent gravel and 5 percent cobbles; neutral (pH 6.6); clear smooth boundary.

A2—11 to 21 inches; yellowish brown (10YR 5/4) very gravelly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to moderate very fine and fine granular; soft, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine irregular pores and common fine tubular pores; 40 percent gravel and 10 percent cobbles; neutral (pH 6.6); clear smooth boundary.

Bt1—21 to 35 inches; yellowish brown (10YR 5/4) very gravelly silty clay loam, brown (10YR 4/3) moist; moderate very fine, fine, and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine and common medium roots; many very fine and fine irregular pores and few medium tubular pores; few faint clay films on faces of peds; 40 percent gravel and 10 percent cobbles; slightly acid (pH 6.4); gradual smooth boundary.

Bt2—35 to 52 inches; yellowish brown (10YR 5/4) very gravelly silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots between peds; many very fine and fine irregular pores and few medium tubular pores; common faint clay films on faces of peds; 40 percent gravel and 20 percent cobbles; slightly acid (pH 6.4); clear smooth boundary.

Bt3—52 to 64 inches; yellowish brown (10YR 5/4) extremely cobbly silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, very sticky and very plastic; common very fine and fine and few medium roots between peds; many very fine and fine irregular pores and few medium tubular pores; common distinct clay films on faces of peds and in pores; 30 percent gravel and 35 percent cobbles; slightly acid (pH 6.2).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 19 inches

## ***Klickson Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, rims

*Parent material:* Loess, alluvium, and/or colluvium derived from basalt

*Slope range:* 15 to 90 percent

*Elevation:* 1,000 to 3,300 feet

*Mean annual precipitation:* 24 to 32 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Vitrandic Argixerolls

### ***Typical Pedon***

Klickson ashy silt loam ([fig. 19](#)) in an area of Klickson-Agatha association, 35 to 75 percent slopes, about 0.5 mile south and 0.5 mile west of Orofino, Idaho; about 900 feet north and 1,200 feet east of the southwest corner of section 7, T. 36 N., R. 2 E.; latitude 46 degrees, 28 minutes, 26 seconds north and longitude 116 degrees, 15 minutes, 38 seconds west; U.S. Geological Survey Orofino West Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A1—2 to 5 inches; dark grayish brown (10YR 4/2) ashy silt loam, very dark brown (10YR 2/2) moist; moderate medium granular structure; hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; neutral (pH 7.0); clear smooth boundary.

A2—5 to 15 inches; dark grayish brown (10YR 4/2) gravelly ashy silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure parting to moderate fine and medium granular; hard, friable, moderately sticky and slightly



**Figure 19.—Typical profile of a Klickson soil. The vitrandic feature is between depths of 0.5 and 21.0 inches (A and AB horizons). The mollic epipedon is between depths of 0.5 and 15.0 inches (A horizon). The argillic horizon is between depths of 21 and 60 inches (Bt1 and 2Bt2 horizons). The particle-size control section is between depths of 21 and 41 inches (part of Bt1 horizon).**

plastic; many very fine and fine, common medium, and few coarse roots; many very fine irregular pores and common very fine tubular pores; 15 percent gravel; neutral (pH 6.8); clear wavy boundary.

AB—15 to 21 inches; brown (10YR 5/3) gravelly silt loam, dark brown (7.5YR 3/2) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and slightly plastic; many very fine and fine, common medium, and many coarse roots; many very fine irregular pores and common very fine and fine tubular pores; 20 percent gravel; neutral (pH 6.6); clear wavy boundary.

Bt1—21 to 35 inches; pale brown (10YR 6/3) gravelly silty clay loam, dark brown (7.5YR 3/2) moist; weak fine prismatic structure parting to moderate fine and



medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and many fine roots; many very fine irregular pores and many very fine and fine tubular pores; many faint and common distinct clay films on faces of peds and in pores; 25 percent gravel and 5 percent cobbles; neutral (pH 6.6); clear smooth boundary.

Bt2—35 to 62 inches; pale brown (10YR 6/3) very gravelly silty clay loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and many fine roots; many very fine irregular pores and many very fine and common fine tubular pores; common distinct clay films on faces of peds and in pores; 35 percent gravel and 20 percent cobbles; slightly acid (pH 6.4).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 20 inches

### ***Konkol Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Hillslopes, ridges

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits

*Slope range:* 5 to 40 percent

*Elevation:* 3,100 to 3,500 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, mixed, active, frigid Andic Hapludalfs

### ***Typical Pedon***

Konkol ashy silt loam in an area of Konkol-Revling complex, 5 to 40 percent slopes, about 2 miles north and 5 miles west of Headquarters, Idaho; about 2,000 feet north and 1,850 feet east of the southwest corner of section 2, T. 38 N., R. 4 E.; latitude 46 degrees, 39 minutes, 48 seconds north and longitude 115 degrees, 55 minutes, 17 seconds west; U.S. Geological Survey John Lewis Mountain Quadrangle.

Oe—0 to 2 inches; moderately decomposed plant material.

A—2 to 3 inches; dark yellowish brown (10YR 4/4) ashy silt loam, dark brown (10YR 3/3) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; few very fine tubular pores; 2 percent gravel; strongly acid (pH 5.1); abrupt smooth boundary.

Bw—3 to 10 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots throughout; few very fine tubular pores; 3 percent gravel; strongly acid (pH 5.4); abrupt smooth boundary.

2Bt1—10 to 18 inches; very pale brown (10YR 7/4) gravelly loam, 95 percent brown (7.5YR 5/4) and 5 percent strong brown (7.5YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common very fine and fine and few medium and coarse roots between peds; common fine and medium tubular pores; common faint

- discontinuous clay films on faces of peds and in pores; 15 percent gravel; moderately acid (pH 5.6); clear wavy boundary.
- 2EB—18 to 25 inches; 90 percent very pale brown (10YR 8/2) and 10 percent very pale brown (10YR 8/4) very fine sandy loam, 90 percent brown (7.5YR 5/4) and 10 percent reddish yellow (7.5YR 6/6) moist; moderate fine and medium subangular blocky structure; moderately hard, friable, slightly sticky and moderately plastic; common very fine and fine roots between peds; many very fine and common fine tubular pores; common faint clay films lining pores; very strongly acid (pH 4.5); abrupt wavy boundary.
- 2Bt2—25 to 29 inches; reddish yellow (7.5YR 7/6) silt loam, reddish yellow (7.5YR 6/8) moist; strong fine and medium subangular blocky structure; moderately hard, friable, slightly sticky and moderately plastic; many very fine and fine and few medium roots between peds; common very fine and fine tubular pores; many distinct continuous clay films on faces of peds and in pores; many faint discontinuous skeletans on faces of peds; very strongly acid (pH 4.5); abrupt wavy boundary.
- 2Bt3—29 to 48 inches; 90 percent very pale brown (10YR 8/3) and 10 percent reddish yellow (7.5YR 7/6) silt loam, 90 percent very pale brown (10YR 7/4) and 10 percent reddish yellow (7.5YR 6/8) moist; strong fine and medium angular blocky structure; very hard, firm, moderately sticky and moderately plastic; common very fine and fine roots between peds; few very fine tubular pores; many distinct continuous clay films on faces of peds and in pores; few faint discontinuous skeletans on faces of peds; 5 percent fine mica flakes; very strongly acid (pH 4.5); clear wavy boundary.
- 2Bt4—48 to 56 inches; 95 percent very pale brown (10YR 8/4) and 5 percent brownish yellow (10YR 6/8) sandy clay loam, 90 percent yellow (10YR 7/6) and 10 percent strong brown (7.5YR 5/8) moist; moderate fine and medium subangular blocky structure; very hard, friable, slightly sticky and moderately plastic; few very fine and fine roots between peds; few very fine tubular pores; many continuous distinct clay films on faces of peds and in pores; many continuous distinct skeletans on faces of peds; 10 percent fine mica flakes; extremely acid (pH 4.2); clear wavy boundary.
- 2Bt5—56 to 64 inches; 95 percent very pale brown (10YR 7/4) and 5 percent brownish yellow (10YR 6/8) very fine sandy loam, 95 percent yellow (10YR 7/6) and 5 percent strong brown (7.5YR 5/8) moist; moderate fine and medium subangular blocky structure; very hard, friable, slightly sticky and moderately plastic; few very fine and fine roots between peds; few very fine tubular pores; many continuous distinct clay films on faces of peds and in pores; many continuous distinct skeletans on faces of peds; 10 percent fine mica flakes; extremely acid (pH 4.3).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 8 to 12 inches

## ***Kooskia Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands, plateaus

*Landform:* Hillslopes, structural benches

*Parent material:* Loess over colluvium derived from basalt

*Slope range:* 3 to 20 percent



## Soil Survey of Clearwater Area, Idaho

*Elevation:* 1,250 to 3,160 feet

*Mean annual precipitation:* 23 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine, smectitic, mesic Xeric Argialbolls

### **Typical Pedon**

Kooskia silt loam, 3 to 10 percent slopes, about 0.5 mile south of Fraser, Idaho; about 900 feet north and 1,800 feet east of the southwest corner of section 7, T. 35 N., R. 3 E.; latitude 46 degrees, 23 minutes, 10 seconds north and longitude 116 degrees, 7 minutes, 47 seconds west; U.S. Geological Survey Orofino East Quadrangle.

- Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; moderate medium granular structure parting to strong fine granular; slightly hard, very friable, slightly sticky and nonplastic; many very fine and fine and few medium roots; many very fine and fine and few medium irregular pores and few fine tubular pores; moderately acid (pH 5.6); abrupt smooth boundary.
- AB—7 to 11 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine and fine irregular pores and common very fine tubular pores; few faint clay films in pores; moderately acid (pH 5.6); abrupt wavy boundary.
- E1—11 to 16 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and nonplastic; many very fine and common fine roots; common very fine, fine, and medium irregular pores; 5 percent fine rounded iron-manganese concretions; slightly acid (pH 6.5); clear irregular boundary.
- E2—16 to 20 inches; very pale brown (10YR 8/2) silt loam, brown (10YR 5/3) moist; massive; soft, friable, nonsticky and nonplastic; common very fine and few fine roots; many very fine and fine tubular pores and few fine vesicular pores; 15 percent fine rounded iron-manganese concretions with larger ones grouped in pockets; neutral (pH 6.8); abrupt wavy boundary.
- Btb1—20 to 24 inches; dark yellowish brown (10YR 4/4) silty clay loam, strong brown (7.5YR 4/6) moist; moderate fine prismatic structure parting to moderate fine subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots; common very fine and few fine and medium tubular pores; many continuous distinct clay films on faces of peds and in pores; common faint silt coatings and few faint organic stains on faces of peds; 10 percent fine rounded iron-manganese concretions; 5 percent gravel; neutral (pH 6.8); abrupt wavy boundary.
- Btb2—24 to 53 inches; dark yellowish brown (10YR 4/4) silty clay, strong brown (7.5YR 4/6) moist; strong coarse prismatic structure; very hard, very firm, very sticky and very plastic; few very fine and fine roots between peds; common very fine and few fine and medium tubular pores; many distinct clay films on faces of peds and common distinct clay films in pores; 5 percent faint silt coatings in veins on faces of peds; 5 percent gravel; neutral (pH 6.8); gradual wavy boundary.
- Btb3—53 to 67 inches; yellowish brown (10YR 5/4) silty clay loam, yellowish brown (10YR 5/6) moist; moderate coarse prismatic structure parting to strong coarse angular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots between peds; few very fine and fine tubular pores and common very fine irregular pores; many distinct clay films on faces of peds and common distinct clay films in pores; neutral (pH 7.3).

***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 18 inches

*Depth to seasonal high perched water table:* 4 to 8 inches in January through April

***Kruse Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, mountains, plateaus

*Landform:* Canyons, hillslopes, mountain slopes, ridges

*Parent material:* Volcanic ash and/or loess over mixed colluvium

*Slope range:* 5 to 65 percent

*Elevation:* 1,600 to 4,000 feet

*Mean annual precipitation:* 25 to 40 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-loamy, isotic, frigid Vitrandic Haploxeralfs

***Typical Pedon***

Kruse ashy loam, 20 to 35 percent slopes, about 1.5 miles north of Cavendish, Idaho; about 2,750 feet north and 1,200 feet west of the southeast corner of section 3, T. 37 N., R. 1 W.; latitude 46 degrees, 34 minutes, 33 seconds north and longitude 116 degrees, 26 minutes, 45 seconds west; U.S. Geological Survey Southwick Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 6 inches; brown (10YR 5/3) ashy loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, and medium and common coarse roots; many very fine and fine tubular pores and many very fine irregular pores; neutral (pH 7.0); clear wavy boundary.

BA—6 to 14 inches; light brown (7.5YR 6/4) ashy loam, dark brown (7.5YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and fine and common coarse roots; many very fine and fine irregular pores and common very fine tubular pores; few faint clay films on faces of peds; neutral (pH 6.8); gradual wavy boundary.

Bt1—14 to 24 inches; brown (7.5YR 5/4) clay loam, dark brown (7.5YR 4/3) moist; moderate medium and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many very fine and fine and common coarse roots; many very fine and fine irregular pores; many faint clay films on faces of peds and in pores; few bleached silt coatings on faces of peds; neutral (pH 6.6); gradual wavy boundary.

Bt2—24 to 30 inches; brown (7.5YR 5/4) clay loam, brown (7.5YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common medium irregular pores; common faint clay films on faces of peds and in pores; common bleached silt coatings on faces of peds; neutral (pH 6.7); gradual wavy boundary.

Bt3—30 to 41 inches; light brown (7.5YR 6/4) loam, brown (7.5YR 4/4) moist; weak coarse prismatic structure parting to moderate fine and medium subangular blocky; hard, firm, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine irregular pores; few faint clay films on faces of peds; common bleached silt coatings on faces of peds; moderately acid (pH 6.0); clear smooth boundary.

- 2BC—41 to 48 inches; light brown (7.5YR 6/4) sandy loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine and fine and common medium and coarse irregular pores; few faint clay films on faces of peds; common bleached silt coatings on faces of peds; moderately acid (pH 5.9); clear smooth boundary.
- 2C—48 to 61 inches; reddish yellow (7.5YR 6/6) loamy sand, strong brown (7.5YR 4/6) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine and medium roots; many very fine and fine irregular pores; moderately acid (pH 5.8).

## **Lacy Series**

*Depth class:* Shallow to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands

*Landform:* Structural benches

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 25 to 55 percent

*Elevation:* 1,800 to 3,000 feet

*Mean annual precipitation:* 24 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Loamy-skeletal, mixed, superactive, mesic Lithic Ultic Argixerolls

### **Typical Pedon**

Lacy loam in an area of Wellsbench-Lacy complex, 25 to 55 percent slopes, about 1.5 miles northeast of Orofino, Idaho; about 1,880 feet south and 450 feet east of the northwest corner of section 5, T. 36 N., R. 2 E.; latitude 46 degrees, 29 minutes, 41 seconds north and longitude 116 degrees, 14 minutes, 29 seconds west; U.S. Geological Survey Orofino East Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 3 inches; brown (10YR 4/3) loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine irregular pores and common very fine tubular pores; 10 percent gravel; slightly acid (pH 6.3); clear wavy boundary.

AB—3 to 7 inches; dark yellowish brown (10YR 4/4) very cobbly loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium and common very fine roots; common fine irregular pores and common very fine, fine, and medium tubular pores; common faint patchy clay films on faces of peds and in pores; 15 percent gravel and 40 percent cobbles; slightly acid (pH 6.4); clear irregular boundary.

Bt1—7 to 13 inches; dark yellowish brown (10YR 4/4) very cobbly clay loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure parting to weak very fine granular; hard, friable, moderately sticky and moderately plastic; many fine and medium and common very fine roots; common fine irregular pores and common very fine, fine, and medium tubular pores; common faint clay films on faces of peds and in pores; 15 percent gravel and 40 percent cobbles; neutral (pH 6.6); clear irregular boundary.

Bt2—13 to 16 inches; dark yellowish brown (10YR 4/4) extremely cobbly clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky

structure parting to weak very fine granular; hard, friable, very sticky and very plastic; many medium and common very fine, fine, and coarse roots; common fine and medium irregular pores and many very fine tubular pores; many faint clay films on faces of peds and in pores; 15 percent gravel and 60 percent cobbles; neutral (pH 6.5); abrupt irregular boundary.

R—16 inches; fractured basalt.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 7 to 18 inches

*Depth to basalt:* 10 to 20 inches

### ***Lado Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, structural benches

*Parent material:* Volcanic ash over loess over colluvium derived from granite and/or metamorphic rock

*Slope range:* 5 to 35 percent

*Elevation:* 1,700 to 4,000 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over mixed, active, frigid Alfic Udivitrands

### ***Typical Pedon***

Lado medial silt loam in an area of Keeler-Lado complex, 10 to 35 percent slopes, about 5 miles south and 6 miles east of Weippe, Idaho; about 600 feet north and 2,100 feet east of the southwest corner of section 11, T. 34 N., R. 5 E.; latitude 46 degrees, 17 minutes, 48 seconds north and longitude 115 degrees, 47 minutes, 52 seconds west; U.S. Geological Survey Brown Creek Ridge Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 4 inches; brown (10YR 5/3) medial silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; many very fine and fine and few medium irregular pores; 10 percent fine rounded iron-manganese concretions; neutral (pH 6.8); abrupt smooth boundary.

Bw1—4 to 9 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine granular structure; soft, friable, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine irregular pores; 2 percent very fine and fine charcoal; 10 percent fine rounded iron-manganese concretions; neutral (pH 6.6); clear smooth boundary.

Bw2—9 to 20 inches; light yellowish brown (10YR 6/4) medial silt loam, dark yellowish brown (10YR 4/6) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; many very fine and fine irregular pores; 3 percent very fine, fine, and medium charcoal; 5 percent medium rounded iron-manganese concretions; slightly acid (pH 6.4); abrupt wavy boundary.

2Bt1—20 to 36 inches; brown (10YR 5/3) clay loam, dark brown (10YR 3/3) moist; moderate very coarse prismatic structure parting to moderate fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common fine and medium roots along faces of peds and few very fine roots in interior of peds; common very fine and fine irregular pores; common distinct clay films on faces of peds; 3 percent very fine and fine charcoal; 2 percent fine mica flakes; slightly acid (pH 6.1); clear smooth boundary.

2Bt2—36 to 48 inches; light yellowish brown (10YR 6/4) clay loam, yellowish brown (10YR 5/4) moist; moderate very coarse prismatic structure parting to weak fine and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and fine roots along faces of peds and few very fine roots in interior of peds; common very fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent fine mica flakes; moderately acid (pH 6.0); clear smooth boundary.

3Bt—48 to 64 inches; very pale brown (10YR 7/4) loam, yellowish brown (10YR 5/6) moist; moderate medium and coarse subangular blocky structure parting to weak very thin platy; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots along faces of peds; common very fine irregular and tubular pores; common faint clay films on faces of peds; 15 percent fine mica flakes oriented horizontally; moderately acid (pH 5.6).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 22 inches

## ***Larkin Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Hillslopes, structural benches

*Parent material:* Volcanic ash and/or loess over colluvium derived from basalt

*Slope range:* 12 to 50 percent

*Elevation:* 1,100 to 3,400 feet

*Mean annual precipitation:* 23 to 28 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine-silty, mixed, superactive, mesic Ultic Argixerolls

### ***Typical Pedon***

Larkin silt loam ([fig. 20](#)) in an area of Larkin-Driscoll complex, 25 to 50 percent slopes, about 3.5 miles south and 1 mile west of Orofino, Idaho; about 2,500 feet south and 1,680 feet east of the northwest corner of section 36, T. 36 N., R. 1 E.; latitude 46 degrees, 25 minutes, 14 seconds north and longitude 116 degrees, 16 minutes, 42 seconds west; U.S. Geological Survey Orofino West Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A1—2 to 5 inches; brown (7.5YR 4/2) silt loam, dark brown (7.5YR 3/3) moist; weak very fine and fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium roots throughout; many very fine irregular pores; neutral (pH 6.6); clear smooth boundary.

A2—5 to 11 inches; brown (7.5YR 4/3) silt loam, dark brown (7.5YR 3/3) moist; weak medium subangular blocky structure parting to weak very fine and fine granular; slightly hard, very friable, slightly sticky and moderately plastic; many very fine and





Figure 20.—Typical profile of a Larkin soil. The mollic epipedon is between depths of 1.5 and 17.0 inches (A and AB horizons). The argillic horizon is between depths of 17 and 62 inches (Bt and Btc horizons). The particle-size control section is between depths of 17 and 37 inches (Bt horizon).

fine roots throughout; many very fine and fine irregular pores and common fine tubular pores; slightly acid (pH 6.1); clear smooth boundary.

AB—11 to 21 inches; brown (7.5YR 4/3) silt loam, dark brown (7.5YR 3/3) moist; weak medium subangular blocky structure and weak fine granular; hard, friable, slightly sticky and moderately plastic; common very fine, fine, and medium roots throughout; many fine and medium tubular pores; few faint dark brown (7.5YR 3/3) clay films in pores; few faint very pale brown (10YR 7/3) skeletalans on faces of peds; slightly acid (pH 6.2); abrupt smooth boundary.

Bt1—21 to 30 inches; strong brown (7.5YR 4/6) silt loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure parting to strong



fine and medium subangular blocky; very hard, firm, slightly sticky and moderately plastic; common fine and few medium roots between peds; many fine and medium tubular pores; many faint dark brown (7.5YR 3/3) clay films on faces of peds and in pores; common faint very pale brown (10YR 7/3) skeletons on faces of peds; slightly acid (pH 6.4); abrupt smooth boundary.

Bt2—30 to 43 inches; strong brown (7.5YR 4/6) silty clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure parting to strong fine and medium subangular blocky; very hard, firm, slightly sticky and moderately plastic; common fine and medium roots between peds; many very fine and fine tubular pores; many distinct dark brown (7.5YR 3/3) clay films on faces of peds and in pores; many distinct very pale brown (10YR 7/3) skeletons on faces of peds; 1 percent very fine rounded iron-manganese concretions; slightly acid (pH 6.4); clear smooth boundary.

2Bt3—43 to 55 inches; strong brown (7.5YR 4/6) silty clay loam, dark brown (7.5YR 3/4) moist; strong medium and coarse subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; common very fine and fine roots between peds; common very fine and fine tubular pores; many prominent dark brown (7.5YR 3/3) clay films on faces of peds; many prominent very pale brown (10YR 7/3) skeletons on faces of peds; 1 percent very fine rounded iron-manganese concretions; slightly acid (pH 6.4); abrupt smooth boundary.

2Bt4—55 to 62 inches; strong brown (7.5YR 4/6) silty clay loam, brown (7.5YR 4/4) moist; strong medium and coarse prismatic structure; extremely hard, extremely firm, moderately sticky and moderately plastic; few very fine roots between peds; common very fine tubular pores; many prominent dark reddish brown (5YR 3/4) clay films on faces of peds; many prominent very pale brown (10YR 7/3) skeletons on faces of peds; 1 percent very fine rounded iron-manganese concretions; 1 percent gravel; slightly acid (pH 6.4).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 20 inches

## ***Latahco Series***

*Depth class:* Very deep

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Drainageways, flood plains

*Parent material:* Mixed alluvium and/or loess

*Slope range:* 0 to 3 percent

*Elevation:* 2,840 to 3,300 feet

*Mean annual precipitation:* 27 to 35 inches

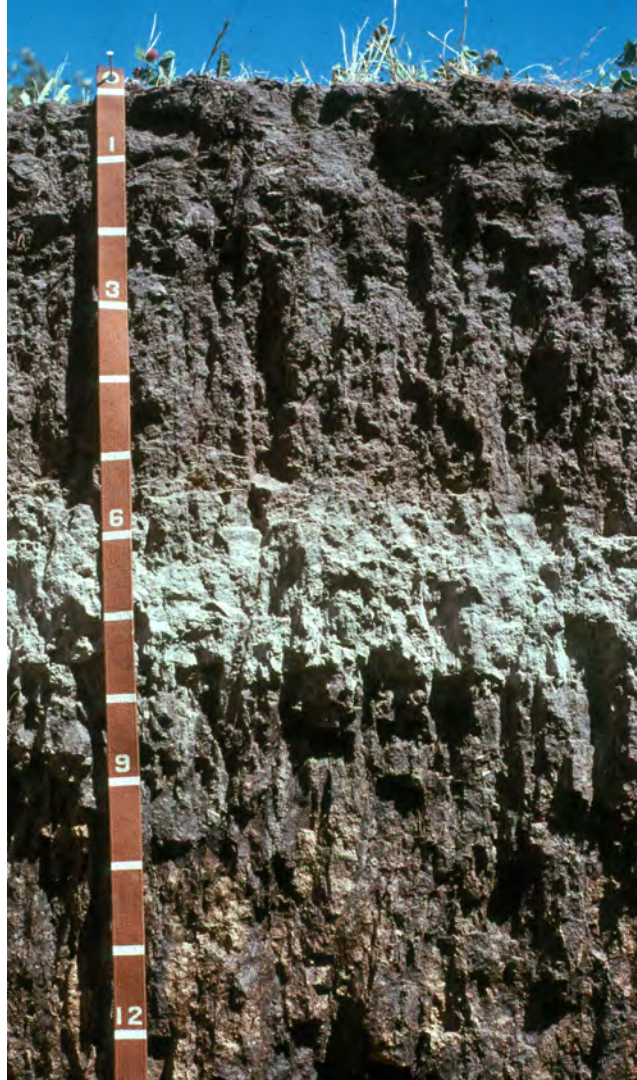
*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Argiaquic Xeric Argialbolls

### ***Typical Pedon***

Latahco silt loam ([fig. 21](#)) in an area of Lebaron-Latahco complex, 0 to 3 percent slopes, about 0.5 mile north and 7 miles west of Weippe, Idaho; about 1,350 feet north and 2,400 feet west of the southeast corner of section 9, T. 35 N., R. 3 E.; latitude 46 degrees, 23 minutes, 14 seconds north and longitude 116 degrees, 5 minutes, 20 seconds west; U.S. Geological Survey Rudo Quadrangle.



**Figure 21.—Typical profile of a Latahco soil. The mollic epipedon extends from the surface of the mineral soil material to a depth of 17 inches (Ap, A, and E1 horizons). The albic horizon is between depths of 17 and 20 inches (E2 horizon). The argillic horizon is between depths of 21 and 51 inches (Bt, Btk, and Btb horizons). The particle-size control section is between depths of 21 and 41 inches (Bt and Btk1 horizons and part of Btk2 horizon).**

Oe—0 to 1 inch; moderately decomposed plant material.

A1—1 to 4 inches; dark brown (7.5YR 2/2) silt loam, black (10YR 2/1) moist; weak fine and medium granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine, fine, and medium irregular pores; slightly acid (pH 6.3); clear smooth boundary.

A2—4 to 12 inches; dark gray (10YR 4/1) silt loam, black (10YR 2/1) moist; few fine distinct yellowish brown (10YR 5/6) redoximorphic concentrations, dark yellowish brown (10YR 4/6) moist; moderate very fine, fine, and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine tubular pores and many very fine, fine, and medium irregular pores; slightly acid (pH 6.3); clear wavy boundary.

- EB—12 to 18 inches; light brownish gray (10YR 6/2) silt loam, dark gray (10YR 4/1) moist; few fine distinct yellowish brown (10YR 5/6) redoximorphic concentrations, dark brown (10YR 4/6) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and common fine tubular pores and common very fine irregular pores; organic stains on faces of peds; slightly acid (pH 6.3); clear wavy boundary.
- E1—18 to 21 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; few fine distinct brownish yellow (10YR 6/6) redoximorphic concentrations, light yellowish brown (10YR 6/4) moist; weak medium prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular and irregular pores; common faint iron-manganese stains on faces of peds; slightly acid (pH 6.3); gradual smooth boundary.
- E2—21 to 27 inches; light gray (10YR 7/2) very fine sandy loam, grayish brown (2.5Y 5/2) moist; common medium distinct light yellowish brown (10YR 6/4) redoximorphic concentrations, yellowish brown (10YR 5/4) moist; moderate medium prismatic structure parting to weak medium subangular blocky; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; common very fine tubular pores; common faint iron-manganese stains on faces of peds; slightly acid (pH 6.3); abrupt wavy boundary.
- Bt1—27 to 35 inches; pale brown (10YR 6/3) silt loam, grayish brown (10YR 5/2) moist; common medium distinct light yellowish brown (10YR 6/4) redoximorphic concentrations, yellowish brown (10YR 5/4) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, brittle, moderately sticky and moderately plastic; common very fine and fine roots; many very fine tubular pores and common very fine irregular pores; common distinct clay films on faces of peds and in pores; few fine rounded iron-manganese concretions; slightly acid (pH 6.3); clear smooth boundary.
- Bt2—35 to 50 inches; pale brown (10YR 6/3) silt loam, brown (10YR 5/3) moist; common medium distinct yellowish brown (10YR 5/6) redoximorphic concentrations, strong brown (7.5YR 4/6) moist; weak very coarse and coarse prismatic structure; slightly hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and fine tubular pores and common very fine irregular pores; common distinct clay films on faces of peds and in pores; common distinct silt coatings on faces of peds; few fine rounded iron-manganese concretions; slightly acid (pH 6.3); gradual smooth boundary.
- Btc—50 to 62 inches; pale brown (10YR 6/3) silty clay loam, grayish brown (10YR 5/2) moist; common medium distinct brownish yellow (10YR 6/6) redoximorphic concentrations, yellowish brown (10YR 5/6) moist; weak medium and coarse prismatic structure parting to weak medium and coarse subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots; common very fine tubular and irregular pores; common distinct clay films on faces of peds and in pores; common fine rounded iron-manganese concretions; neutral (pH 6.8).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 11 to 16 inches

*Depth to seasonal high perched water table:* 7 to 19 inches in February and March

*Flooding:* Occasional, brief periods in February through April

## ***Lebaron Series***

*Depth class:* Very deep

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

## Soil Survey of Clearwater Area, Idaho

*Landscape:* Plateaus

*Landform:* Drainageways, flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 3 percent

*Elevation:* 2,840 to 3,300 feet

*Mean annual precipitation:* 27 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Aquandic Palexeralfs

### **Typical Pedon**

Lebaron ashy silt loam in an area of Lebaron-Latahco complex, 0 to 3 percent slopes, about 0.5 mile north and 7 miles west of Weippe, Idaho; about 1,500 feet north and 2,450 feet west of the southeast corner of section 9, T. 35 N., R. 3 E.; latitude 46 degrees, 23 minutes, 15 seconds north and longitude 116 degrees, 5 minutes, 21 seconds west; U.S. Geological Survey Rudo Quadrangle.

Oe—0 to 1 inch; moderately decomposed plant material.

A1—1 to 5 inches; grayish brown (10YR 5/2) ashy silt loam, very dark grayish brown (10YR 3/2) moist; few fine faint light brown (7.5YR 6/4) redoximorphic concentrations, strong brown (7.5YR 4/6) moist; moderate thin platy structure parting to weak fine granular; hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; slightly acid (pH 6.5); clear wavy boundary.

A2—5 to 9 inches; light brownish gray (10YR 6/2) ashy silt loam, dark grayish brown (10YR 4/2) moist; few fine faint yellowish brown (10YR 5/6) redoximorphic concentrations, dark yellowish brown (10YR 4/6) moist; moderate thin platy structure parting to moderate fine subangular blocky; hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and fine tubular pores; few faint clay films on faces of peds and in pores; slightly acid (pH 6.4); clear wavy boundary.

E1—9 to 12 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; common medium faint and prominent strong brown (7.5YR 5/6) redoximorphic concentrations, strong brown (7.5YR 4/6) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine and common fine tubular pores and common very fine irregular pores; few fine rounded iron-manganese concretions; slightly acid (pH 6.4); clear smooth boundary.

E2—12 to 17 inches; light gray (10YR 7/2) silt loam, grayish brown (2.5Y 5/2) moist; many coarse faint and prominent brownish yellow (10YR 6/6) redoximorphic concentrations, strong brown (7.5YR 4/6) moist; massive; slightly hard, friable, slightly sticky and nonplastic; many very fine and fine roots; many very fine and few fine tubular pores and few very fine irregular pores; few fine rounded iron-manganese concretions; slightly acid (pH 6.2); abrupt smooth boundary.

Btb1—17 to 25 inches; yellowish brown (10YR 5/4) silty clay loam, brown (10YR 4/3) moist; many fine faint strong brown (7.5YR 5/6) redoximorphic concentrations, strong brown (7.5YR 4/6) moist; moderate fine and medium prismatic structure; very hard, firm, very sticky and moderately plastic; many very fine and few fine roots along prism faces; many very fine and fine and few medium tubular pores; many prominent clay films on faces of peds and in pores; common faint silt coatings on faces of peds; slightly acid (pH 6.1); clear wavy boundary.

Btb2—25 to 47 inches; light yellowish brown (10YR 6/4) silty clay loam, brown (10YR 4/3) moist; many fine faint and few fine prominent brownish yellow (10YR 6/6) redoximorphic concentrations, strong brown (7.5YR 4/6) moist; strong fine and medium prismatic structure; very hard, somewhat brittle, moderately sticky and



moderately plastic; few very fine roots along prism faces; many very fine and fine and few medium tubular pores; common prominent and many distinct clay films on faces of peds and in pores; common faint silt coatings and dark organic stains on faces of peds; slightly acid (pH 6.3); gradual wavy boundary.

Btb3—47 to 56 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; common fine faint yellowish brown (10YR 5/6) redoximorphic concentrations, strong brown (7.5YR 4/4) moist; strong fine prismatic structure; very hard, very firm, very sticky and moderately plastic; few very fine roots; common very fine and fine tubular pores; many prominent and common distinct clay films on faces of peds and in pores; common faint silt coatings and dark organic manganese stains on faces of peds; many fine rounded iron-manganese concretions; neutral (pH 6.6); clear wavy boundary.

Btb4—56 to 62 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; many medium distinct yellowish brown (10YR 5/6) redoximorphic concentrations, strong brown (7.5YR 4/6) moist; moderate medium prismatic structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; common prominent and few distinct clay films on faces of peds and in pores; many faint silt coatings on faces of peds; many fine rounded iron-manganese concretions; slightly acid (pH 6.5).

### ***Range in Characteristics***

*Depth to seasonal high apparent water table:* At the surface to a depth of 60 inches in January through December

*Depth to seasonal high perched water table:* At the surface to a depth of 27 inches in November through January and in July

*Flooding:* Rare, brief periods in December through April

## ***Lewhand Series***

*Depth class:* Shallow to a fragipan

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Mountains, plateaus

*Landform:* Drainageways, flood plains, mountain slopes

*Parent material:* Volcanic ash over mixed alluvium

*Slope range:* 0 to 2 percent

*Elevation:* 3,000 to 3,400 feet

*Mean annual precipitation:* 30 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-silty, mixed, active, frigid Vitrandic Fragiudalfs

### ***Typical Pedon***

Lewhand ashy silty clay loam ([fig. 22](#)) in an area of Lewhand-Teneb complex, 0 to 2 percent slopes, about 2 miles south and 2 miles east of Weippe, Idaho; about 2,070 feet south and 250 feet east of the northwest corner of section 30, T. 35 N., R. 5 E.; latitude 46 degrees, 20 minutes, 54 seconds north and longitude 115 degrees, 53 minutes, 19 seconds west; U.S. Geological Survey Weippe South Quadrangle.

A1—0 to 3 inches; very dark brown (10YR 2/2) ashy silty clay loam, black (10YR 2/1) moist; strong very fine subangular blocky structure; very hard, firm, slightly sticky and moderately plastic; many very fine and fine and few medium roots; many very fine and fine and common medium irregular pores; strongly acid (pH 5.2); clear smooth boundary.



**Figure 22.—Typical profile of a Lewhand soil. The ochric epipedon extends from the surface to a depth of 8 inches (A horizon). The fragipan is between depths of 18 and 32 inches (Btx horizon). The particle-size control section is between depths of 10 and 18 inches (E horizon and part of B/E horizon). The aquic feature is characterized by redoximorphic depletions with chroma of 2 or less in the upper 10 inches of the Btx horizon and aquic conditions in November through June.**

- A2—3 to 8 inches; very dark grayish brown (10YR 3/2) ashy silt loam, black (10YR 2/1) moist; moderate medium subangular blocky structure parting to strong very fine subangular blocky; very hard, firm, moderately sticky and moderately plastic; many very fine and common fine roots; many very fine and few fine tubular pores and many very fine irregular pores; strongly acid (pH 5.2); abrupt smooth boundary.
- BE—8 to 12 inches; very pale brown (10YR 7/3) silty clay loam, dark yellowish brown (10YR 3/4) moist; weak medium prismatic structure parting to strong fine and medium subangular blocky; very hard, firm, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and common fine and



- medium tubular pores; few fine distinct redoximorphic concentrations that are dark yellowish brown (10YR 4/4) moist; common distinct light yellowish brown (10YR 6/4) skeletons on faces of peds; strongly acid (pH 5.4); clear smooth boundary.
- E—12 to 18 inches; light gray (10YR 7/2) silt loam, grayish brown (2.5Y 5/2) moist; moderate medium and coarse prismatic structure; very hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots along faces of peds; many very fine and few fine tubular pores and common very fine irregular pores; common fine and medium prominent redoximorphic concentrations that are strong brown (7.5YR 4/6) moist; strongly acid (pH 5.1); clear smooth boundary;
- Btx—18 to 32 inches; very pale brown (10YR 7/3) silt loam, light olive brown (2.5Y 5/3) moist; strong coarse and very coarse prismatic structure; extremely hard, very firm, slightly sticky and slightly plastic; common very fine and few fine roots along faces of peds; common very fine tubular and irregular pores; common fine prominent redoximorphic concentrations that are brown (7.5YR 4/4) moist and are inside prisms; few fine faint redoximorphic depletions that are grayish brown (2.5Y 5/2) moist and are on faces of peds; many prominent very dark brown (10YR 2/2) clay films on faces of peds; moderately acid (pH 5.8); gradual smooth boundary.
- Bt1—32 to 56 inches; light gray (10YR 7/2), stratified silt loam to sandy loam, light olive brown (2.5Y 5/3) moist; weak very coarse prismatic structure; hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine and common fine tubular pores; few distinct very dark grayish brown (10YR 3/2) clay films in pores; common fine prominent redoximorphic concentrations that are brown (7.5YR 4/4) moist; slightly acid (pH 6.1); clear smooth boundary.
- Bt2—56 to 60 inches; yellowish brown (10YR 5/4), stratified sandy loam to sand, light olive brown (2.5Y 5/3) moist; weak very coarse prismatic structure; slightly hard, friable, nonsticky and nonplastic; few very fine roots; common very fine and few fine tubular pores; common fine and medium prominent redoximorphic concentrations that are dark yellowish brown (10YR 4/6) and few fine prominent redoximorphic depletions that are olive gray (5Y 4/2) moist; few distinct clay films in pores; moderately acid (pH 5.7).

### ***Range in Characteristics***

*Depth to seasonal high perched water table:* At the surface to a depth of 19 inches in November through July

*Depth to seasonal high apparent water table:* 7 to 60 inches in January through December

*Depth to the fragipan:* 13 to 19 inches

*Flooding:* Occasional, long periods in November through March

### ***Longbar Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Colluvium derived from anorthosite

*Slope range:* 15 to 65 percent

*Elevation:* 1,600 to 3,400 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Typic Hapludolls

### ***Typical Pedon***

Longbar loam in an area of Longbar-Bigtalk complex, 35 to 65 percent slopes, about 16 miles north of Headquarters, Idaho; about 1,600 feet north and 350 feet east of the southwest corner of section 23, T. 41 N., R. 5 E.; latitude 46 degrees, 52 minutes, 52 seconds north and longitude 115 degrees, 47 minutes, 47 seconds west; U.S. Geological Survey Little Goat Mountains Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 6 inches; dark gray (10YR 4/1) loam, black (10YR 2/1) moist; weak fine and medium subangular blocky structure parting to moderate fine and very fine granular; slightly hard, friable, nonsticky and slightly plastic; many fine and medium and common coarse roots; many very fine and fine irregular pores; 1 percent fine mica flakes; 5 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

BAt—6 to 12 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common coarse roots; many very fine and fine irregular pores; few discontinuous faint very dark brown (10YR 2/2) clay films on faces of peds; 1 percent fine mica flakes; 10 percent gravel; moderately acid (pH 5.8); clear irregular boundary.

Bt1—12 to 18 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, slightly sticky and moderately plastic; common very fine and fine roots throughout and few coarse roots between peds; common very fine and fine irregular and tubular pores; common continuous faint very dark grayish brown (10YR 3/2) clay films on faces of peds; 2 percent fine mica flakes; 10 percent gravel; moderately acid (pH 5.6); clear wavy boundary.

Bt2—18 to 28 inches; pale brown (10YR 6/3) loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure, slightly hard, firm, slightly sticky and slightly plastic; common fine to coarse roots between peds; common very fine tubular pores; common continuous faint brown (10YR 4/3) clay films on faces of peds and in pores; 3 percent fine mica flakes; 10 percent gravel; moderately acid (pH 5.6); clear wavy boundary.

BC—28 to 41 inches; very pale brown (10YR 7/4) gravelly sandy loam, yellowish brown (10YR 5/4) moist; moderate medium to coarse subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; common fine and medium and few coarse roots between peds and common very fine roots throughout; few discontinuous faint dark yellowish brown (10YR 4/4) clay films on faces of peds; 10 percent very fine and fine mica flakes; 15 percent gravel; strongly acid (pH 5.5); clear smooth boundary.

C1—41 to 50 inches; very pale brown (10YR 7/4) sandy loam, yellowish brown (10YR 5/6) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine and few coarse roots between peds and few very fine roots throughout; few very fine tubular pores; few fine horizontal clay bands; 15 percent very fine and fine mica flakes; 5 percent gravel; strongly acid (pH 5.5); clear smooth boundary.

C2—50 to 62 inches; pale yellow (2.5Y 7/4) loamy sand, light yellowish brown (2.5Y 6/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and coarse roots between cracks; few fine horizontal clay bands; 15 percent very fine and fine mica flakes; 5 percent gravel; strongly acid (pH 5.4).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 9 to 16 inches

## **Longpen Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, hillslopes, structural benches

*Parent material:* Volcanic ash and/or loess over colluvium derived from basalt

*Slope range:* 5 to 40 percent

*Elevation:* 1,100 to 3,400 feet

*Mean annual precipitation:* 28 to 40 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Vitrandic Haploxeralfs

### **Typical Pedon**

Longpen ashy silt loam, 20 to 40 percent slopes, about 6 miles north of Orofino, Idaho; about 900 feet north and 1,600 feet east of the southwest corner of section 4, T. 37 N., R. 2 E.; latitude 46 degrees, 34 minutes, 31 seconds north and longitude 116 degrees, 12 minutes, 48 seconds west; U.S. Geological Survey Dent Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A1—2 to 6 inches; brown (10YR 4/3) ashy silt loam, dark brown (7.5YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine, fine, and medium tubular pores; 5 percent paragravel; slightly acid (pH 6.3); clear smooth boundary.

A2—6 to 9 inches; dark yellowish brown (10YR 4/4) ashy silt loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine, fine, and medium tubular pores; slightly acid (pH 6.3); clear wavy boundary.

BtA—9 to 18 inches; yellowish brown (10YR 5/4) silt loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many medium and common very fine and fine roots; many very fine and common fine tubular pores; common faint clay films lining pores and on faces of peds; slightly acid (pH 6.1); clear smooth boundary.

Bt1—18 to 28 inches; brown (7.5YR 5/4) silt loam, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common fine, medium, and coarse roots; common very fine and fine tubular pores; common faint clay films lining pores and on faces of peds; common clean silt coatings on faces of peds; slightly acid (pH 6.1); gradual smooth boundary.

Bt2—28 to 49 inches; brown (7.5YR 5/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; common fine, medium, and coarse roots; common very fine and fine tubular pores; common faint clay films lining pores and on faces of peds; common clean silt coatings on faces of peds; moderately acid (pH 5.9); clear smooth boundary.

2Btb1—49 to 65 inches; brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 3/3) moist; moderate medium subangular blocky structure; very hard, very firm, very sticky and very plastic; common fine and medium roots; few very fine tubular pores; common faint clay films in pores and on faces of peds; common clean silt coatings on faces of peds; moderately acid (pH 5.8); clear smooth boundary.

2Btb2—65 to 71 inches; brown (7.5YR 4/4) silty clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, very sticky and very plastic; common very fine and few fine tubular pores; common faint clay films in pores and on faces of peds; moderately acid (pH 5.6).

### ***Lostpete Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Volcanic ash over loess and/or colluvium derived from granite and/or gneiss

*Slope range:* 10 to 30 percent

*Elevation:* 1,900 to 4,600 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over mixed, active, frigid Alfic Udivitrands

### ***Typical Pedon***

Lostpete medial silt loam in an area of Brodeer-Lostpete complex, 15 to 45 percent slopes, about 12 miles northeast of Headquarters, Idaho; about 1,150 feet south and 850 feet west of the northeast corner of section 22, T. 40 N., R. 6 E.; latitude 46 degrees, 48 minutes, 1 second north and longitude 115 degrees, 40 minutes, 59 seconds west; U.S. Geological Survey Thompson Point Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 5 inches; dark yellowish brown (10YR 4/4) medial silt loam, dark brown (7.5YR 3/3) moist; weak fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine and common fine and medium roots; many very fine and fine and few medium irregular pores; 5 percent fine iron-manganese concretions; moderately acid (pH 6.0); abrupt wavy boundary.

Bw1—5 to 13 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, common fine and medium, and few coarse roots; many very fine, common fine, and few medium irregular pores; 3 percent fine iron-manganese concretions; slightly acid (pH 6.2); clear wavy boundary.

Bw2—13 to 19 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; many very fine, common fine, and few medium and coarse roots; common very fine and few fine irregular pores and common very fine tubular pores; 3 percent fine iron-manganese concretions; slightly acid (pH 6.2); abrupt wavy boundary.

2Bt1—19 to 29 inches; light yellowish brown (10YR 6/4) silt loam, strong brown (7.5YR 4/6) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; many very fine and few fine tubular pores; few faint clay films in pores and on faces of peds; 2 percent fine mica flakes; slightly acid (pH 6.2); clear wavy boundary.

2Bt2—29 to 42 inches; very pale brown (10YR 7/4) silt loam, brown (7.5YR 4/4) moist; weak coarse prismatic structure parting to moderate coarse subangular blocky; hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine and few fine and medium tubular pores; common faint clay films in pores and on faces of peds; many distinct very pale brown (10YR 7/4) uncoated silt grains in pores and on faces of peds; 10 percent fine mica flakes; moderately acid (pH 6.0); diffuse wavy boundary.

2Bt3—42 to 52 inches; light brown (7.5YR 6/4) silt loam, brown (7.5YR 4/4) moist; weak coarse prismatic structure parting to moderate coarse subangular blocky; hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine and few fine and medium pores; many distinct clay films in pores and on faces of peds; few faint very pale brown (10YR 7/4) uncoated silt grains in pores and on faces of peds; 3 percent fine mica flakes; moderately acid (pH 6.0); diffuse wavy boundary.

2Bt4—52 to 61 inches; light brown (7.5YR 6/4) silt loam, brown (7.5YR 4/4) moist; weak coarse prismatic structure parting to moderate medium and coarse subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine and few fine and medium tubular pores; common faint clay films in pores and on faces of peds; few faint very pale brown (10YR 7/4) uncoated silt grains in pores and on faces of peds; 5 percent fine mica flakes; moderately acid (pH 5.8); diffuse wavy boundary.

2Bt5—61 to 66 inches; light brown (7.5YR 6/4) silt loam, strong brown (7.5YR 4/6) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine and few fine tubular pores; common faint clay films in pores and on faces of peds; 2 percent fine mica flakes; moderately acid (pH 5.6).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 20 inches

## ***Marblecreek Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Volcanic ash over colluvium derived from schist, quartzite, and/or granite

*Slope range:* 35 to 65 percent

*Elevation:* 2,600 to 5,000 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Andic Dystrudepts

### ***Typical Pedon***

Marblecreek gravelly ashy silt loam in an area of Boulder creek-Marblecreek association, 35 to 65 percent slopes; Shoshone County, Idaho; St. Joe Area, Parts of Benewah and Shoshone Counties, Idaho, soil survey area; about 2 miles southeast of Herrick, Idaho; about 2,000 feet north and 1,750 feet west of the southeast corner of section 16, T. 45. N., R. 3 E.; latitude 47 degrees, 14 minutes, 39 seconds north and



## Soil Survey of Clearwater Area, Idaho

longitude 116 degrees, 4 minutes, 50 seconds west; U.S. Geological Survey Marble Mountain Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 5 inches; brown (10YR 5/3) gravelly ashy silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to weak fine and medium granular; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium roots; many very fine tubular pores; 25 percent gravel; neutral (pH 7.0); clear wavy boundary.

Bw1—5 to 13 inches; light yellowish brown (10YR 6/4) gravelly ashy silt loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine and fine tubular pores; 25 percent gravel and 5 percent cobbles; neutral (pH 6.8); abrupt wavy boundary.

2Bw2—13 to 27 inches; very pale brown (10YR 7/4) very gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine and few medium and coarse roots; many very fine and fine tubular and irregular pores; few faint clay films lining pores; 40 percent gravel and 10 percent cobbles; slightly acid (pH 6.2); gradual wavy boundary.

2BC—27 to 46 inches; pink (7.5YR 7/4) extremely gravelly sandy loam, brown (7.5YR 5/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine irregular pores; many very fine mica flakes; 50 percent gravel and 20 percent cobbles; slightly acid (pH 6.5); gradual wavy boundary.

2C—46 to 62 inches; pink (7.5YR 7/4) extremely cobbly loamy sand, brown (7.5YR 5/4) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine and fine irregular pores; many very fine mica flakes; 45 percent gravel and 45 percent cobbles; slightly acid (pH 6.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 9 to 13 inches

## ***McCrosket Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains, plateaus

*Landform:* Hillslopes, mountain slopes

*Parent material:* Volcanic ash and/or loess over residuum derived from metasedimentary rock

*Slope range:* 15 to 65 percent

*Elevation:* 2,200 to 4,000 feet

*Mean annual precipitation:* 25 to 27 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Loamy-skeletal, mixed, active, mesic Ultic Haploxerolls

### ***Typical Pedon***

McCrosket gravelly silt loam in an area of Kruse-McCrosket complex, 35 to 65 percent slopes, about 2 miles north of Cavendish, Idaho; about 1,200 feet south and



## Soil Survey of Clearwater Area, Idaho

1,300 feet east of the northwest corner of section 2, T. 37 N., R. 1 W.; latitude 46 degrees, 34 minutes, 56 seconds north and longitude 116 degrees, 25 minutes, 44 seconds west; U.S. Geological Survey Southwick Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A1—2 to 9 inches; brown (7.5YR 4/2) gravelly silt loam, dark brown (7.5YR 3/2) moist; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, and medium and common coarse roots; many very fine and fine irregular pores; 20 percent gravel; neutral (pH 6.6); clear smooth boundary.

A2—9 to 15 inches; brown (7.5YR 4/3) gravelly silt loam, dark brown (7.5YR 3/3) moist; weak fine subangular blocky structure parting to weak fine and medium granular; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium and common coarse roots; many very fine and fine irregular pores; krotovina about 3 inches in diameter that is filled with granular A material; 20 percent gravel and 5 percent cobbles; neutral (pH 6.6); clear smooth boundary.

Bw1—15 to 22 inches; brown (7.5YR 5/4) very cobbly loam, brown (7.5YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine, medium, and coarse roots; common very fine and fine tubular pores and common very fine irregular pores; 20 percent gravel and 30 percent cobbles; slightly acid (pH 6.2); gradual wavy boundary.

Bw2—22 to 35 inches; brown (7.5YR 5/4) extremely cobbly loam, reddish brown (5YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine, medium, and coarse roots; common very fine and fine tubular pores and common very fine irregular pores; 25 percent gravel and 50 percent cobbles; slightly acid (pH 6.2); gradual wavy boundary.

Bw3—35 to 48 inches; yellowish red (5YR 5/6) extremely cobbly loam, reddish brown (5YR 5/4) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine and medium and few coarse roots; common very fine and fine irregular pores; 30 percent gravel and 50 percent cobbles; moderately acid (pH 5.8); gradual wavy boundary.

Cr—48 inches; fractured, weathered metasedimentary rock.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 15 inches

*Depth to weathered bedrock:* 40 to 60 inches

## ***Meland Series***

*Depth class:* Moderately deep to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Hills, knobs, structural benches

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 5 to 25 percent

*Elevation:* 1,500 to 3,700 feet

*Mean annual precipitation:* 18 to 24 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Ultic Argixerolls

### ***Typical Pedon***

Meland silt loam in an area of Meland-Jacket complex, 5 to 20 percent slopes; Nez Perce County, Idaho; about 1.5 miles northeast of Lenore, Idaho; about 15 feet south and 20 feet east of the northwest corner of section 25, T. 37 N., R. 2 W.; latitude 46 degrees, 31 minutes, 45 seconds north and longitude 116 degrees, 30 minutes, 51 seconds west; U.S. Geological Survey Lenore Quadrangle.

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak medium and coarse subangular blocky structure parting to weak fine and medium granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine roots throughout; many very fine and few fine tubular pores; moderately acid (pH 6.0); clear wavy boundary.

Bt1—10 to 16 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; moderate medium subangular blocky structure; slightly hard, friable, sticky and slightly plastic; common very fine and few fine roots throughout; common very fine and few fine tubular pores; few faint clay films on faces of peds and in pores; 5 percent gravel; slightly acid (pH 6.5); gradual wavy boundary.

Bt2—16 to 35 inches; pale brown (10YR 6/3) gravelly silty clay loam, brown (10YR 4/3) moist; moderate medium and coarse subangular blocky structure; hard, firm, sticky and plastic; few very fine roots between peds; common very fine tubular pores; common faint clay films on faces of peds and in pores; 20 percent gravel; slightly acid (pH 6.5); abrupt irregular boundary.

R—35 inches; fractured basalt.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 15 to 20 inches

*Depth to basalt:* 20 to 40 inches

### ***Mushel Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountains, ridges

*Parent material:* Volcanic ash over colluvium over residuum derived from granite and/or metamorphic rock

*Slope range:* 15 to 75 percent

*Elevation:* 2,600 to 4,300 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Coarse-loamy, isotic, frigid Andic Hapludalfs

### ***Typical Pedon***

Mushel ashy silt loam in an area of Brodeer-Mushel complex, 35 to 75 percent slopes, about 2 miles south and 6 miles east of Weippe, Idaho; about 700 feet north and 1,600 feet west of the southeast corner of section 26, T. 35 N., R. 5 E.; latitude 46 degrees, 20 minutes, 29 seconds north and longitude 115 degrees, 47 minutes, 32 seconds west; U.S. Geological Survey Brown Creek Ridge Quadrangle.

Oi—0 to 3 inches; slightly decomposed plant material.

A—3 to 6 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/3) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and

## Soil Survey of Clearwater Area, Idaho

nonplastic; many very fine and fine and common medium and coarse roots; many very fine and fine irregular pores; 2 percent fine charcoal; few fine rounded iron-manganese concretions; slightly acid (pH 6.4); clear smooth boundary.

- Bw—6 to 13 inches; light yellowish brown (10YR 6/4) ashy silt loam, brown (7.5YR 4/3) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine, common medium, and few coarse roots; many very fine irregular pores and few fine and medium tubular pores; 2 percent fine charcoal; few fine rounded iron-manganese concretions; 5 percent gravel; slightly acid (pH 6.2); abrupt wavy boundary.
- 2BE—13 to 21 inches; 75 percent very pale brown (10YR 7/4) loam, brown (10YR 4/3) moist, and 25 percent light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots along faces of peds and few very fine roots in interior of peds; common very fine and fine irregular pores and few very fine and fine tubular pores; few distinct clay films on faces of peds and in pores; 2-inch-wide krotovina; 2 percent fine mica flakes; 5 percent gravel; slightly acid (pH 6.2); gradual smooth boundary.
- 2Bt1—21 to 31 inches; light yellowish brown (10YR 6/4) loam, yellowish brown (10YR 5/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine and fine roots along faces of peds and few very fine roots in interior of peds; common very fine and fine irregular and tubular pores; few distinct clay films on faces of peds; few yellowish brown (10YR 5/4) areas of clay enrichment; 3 percent fine mica flakes; 10 percent gravel; slightly acid (pH 6.4); clear smooth boundary.
- 2Bt2—31 to 39 inches; very pale brown (10YR 7/4) gravelly fine sandy loam, brown (10YR 5/3) moist; weak medium and coarse subangular blocky structure parting to moderate fine and medium subangular blocky; slightly hard, firm, slightly sticky and slightly plastic; few very fine and fine roots along faces of peds and few very fine roots in interior of peds; common very fine and fine irregular and tubular pores; yellowish brown (10YR 5/6) loam lamellae that are 0.5 to 1.0 inch thick and 1 to 3 inches apart; 4 percent fine mica flakes; 25 percent gravel; slightly acid (pH 6.5); clear smooth boundary.
- 2BC—39 to 48 inches; very pale brown (10YR 7/4) loam, yellowish brown (10YR 5/6) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine roots on faces of peds; many very fine and few fine tubular pores and common very fine irregular pores; brown (10YR 5/4) loam lamellae that are 0.5 to 1.0 inch thick and 5 to 7 inches apart; 5 percent fine mica flakes; 5 percent gravel; moderately acid (pH 6.0); clear smooth boundary.
- 2C1—48 to 61 inches; very pale brown (10YR 7/4) sandy loam, light yellowish brown (10YR 6/4) moist; weak fine subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots along faces of peds; common very fine and fine irregular pores and few very fine tubular pores; yellowish red (5YR 5/6) loam lamellae that are 0.5 to 1.0 inch thick and 1 to 3 inches apart; 3 percent fine mica flakes; moderately acid (pH 5.6); clear smooth boundary.
- 2C2—61 to 68 inches; very pale brown (10YR 7/4) sandy loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, friable; few very fine roots in cracks; few very fine irregular pores; 2 percent fine mica flakes; moderately acid (pH 5.6).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 8 to 13 inches

## ***Nakarna Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Foothills, mountains

*Landform:* Hills, mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium over residuum derived from mica schist

*Slope range:* 15 to 65 percent

*Elevation:* 1,600 to 4,700 feet

*Mean annual precipitation:* 35 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over paramicaceous, frigid Typic Udivitrands

### ***Typical Pedon***

Nakarna ashy silt loam in an area of Poorman-Grandad complex, 15 to 35 percent slopes, about 3 miles southeast of Elk River, Idaho; about 1,000 feet south and 500 feet east of the northwest corner of section 7, T. 39 N., R. 3 E.; latitude 46 degrees, 44 minutes, 35 seconds north and longitude 116 degrees, 8 minutes, 19 seconds west; U.S. Geological Survey Elk Creek Falls Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 5 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 3/3) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots; many very fine and fine irregular pores; moderately acid (pH 5.8); clear wavy boundary.

Bw1—5 to 15 inches; light yellowish brown (10YR 6/4) ashy silt loam, brown (7.5YR 4/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots; many very fine and fine irregular pores; slightly acid (pH 6.2); abrupt wavy boundary.

2Bw2—15 to 23 inches; light brown (7.5YR 6/3) silt loam, brown (7.5YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; many fine and very fine irregular pores and common fine and medium tubular pores; 15 percent fine mica flakes; strongly acid (pH 5.1); clear wavy boundary.

2Bw3—23 to 34 inches; yellowish brown (10YR 5/4) gravelly loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common fine and very fine roots; many fine and very fine irregular pores and common fine and very fine tubular pores; 40 percent fine mica flakes; 15 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

2C—34 to 42 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few fine and very fine roots; common fine and very fine irregular and tubular pores; 0.25-inch-wide clay band with common moderate subangular blocky structure and few faint clay films; 70 percent fine mica flakes; 20 percent gravel; strongly acid (pH 5.2); abrupt wavy boundary.

2Cr—42 inches; weathered mica schist.

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 20 inches

*Depth to weathered mica schist:* 40 to 60 inches

## **Narnett Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountains, terraces

*Parent material:* Volcanic ash over mixed silty alluvium

*Slope range:* 5 to 30 percent

*Elevation:* 3,300 to 4,000 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 30 to 110 days

*Taxonomic class:* Fine-silty, mixed, active Andic Haplocryalfs

### **Typical Pedon**

Narnett medial silt loam in an area of Narnett-Jury complex, 15 to 30 percent slopes, about 10 miles northeast of Pierce, Idaho; about 1,100 feet north and 800 feet west of the southeast corner of section 4, T. 37 N., R. 6 E.; latitude 46 degrees, 34 minutes, 28 seconds north and longitude 115 degrees, 42 minutes 0 seconds west; U.S. Geological Survey French Mountain Quadrangle.

A—0 to 9 inches; yellowish brown (10YR 5/4) medial silt loam, dark yellowish brown (10YR 3/4) moist; weak medium and fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine and fine roots; many very fine, fine, and medium irregular and tubular pores; 3 percent mica flakes; 2 percent gravel; slightly acid (pH 6.5); clear smooth boundary.

2Bw—9 to 15 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure parting to weak fine subangular blocky; slightly hard, very friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; many fine and medium irregular pores and many very fine tubular pores; 3 percent mica flakes; 2 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

2Bt1—15 to 24 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/6) moist, with pockets of light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine roots; many very fine and fine tubular pores; bridge of sand grains in matrix and few faint clay films on faces of peds and in pores; organic stains in pores; 3 percent mica flakes; 3 percent gravel; strongly acid (pH 5.5); clear smooth boundary.

2Bt2—24 to 32 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/6) moist; moderate medium and fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine roots, some as root mats; common very fine and fine tubular pores and common fine irregular pores; bridge of sand grains in matrix and few faint clay films on faces of peds and in pores; 3 percent mica flakes; 3 percent gravel; strongly acid (pH 5.5); clear smooth boundary.

2Bt3—32 to 50 inches; very pale brown (10YR 7/4) clay loam, yellowish brown (10YR 5/6) moist; moderate coarse and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few fine and medium roots; common very fine and fine tubular pores and common fine irregular pores; common faint clay films on faces of peds and in pores; 10 percent of horizon is dense and brittle when moist; 3 percent mica flakes; 5 percent gravel; strongly acid (pH 5.5); gradual smooth boundary.



- 3BC1—50 to 54 inches; yellow (10YR 7/6) silt loam, yellowish brown (10YR 5/8) moist; moderate coarse and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common fine and medium roots; common fine irregular pores and few fine tubular pores; common brownish yellow (10YR 6/8) iron stains; 10 percent mica flakes; 5 percent gravel; strongly acid (pH 5.5); abrupt smooth boundary.
- 3BC2—54 to 58 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/6) moist; moderate coarse and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few fine roots; common fine irregular pores and few fine tubular pores; common strong brown (7.5YR 5/6) iron stains; few distinct clay films in pores; 10 percent mica flakes; 5 percent gravel; strongly acid (pH 5.5); abrupt wavy boundary.
- 3C—58 to 80 inches; very pale brown (10YR 7/4) very gravelly silt loam, yellowish brown (10YR 5/6) moist; massive; hard, friable, moderately sticky and moderately plastic; few fine roots; few fine irregular and tubular pores; strong brown (7.5YR 5/6) iron stains; 10 percent mica flakes; 30 percent gravel and 5 percent cobbles; very strongly acid (pH 4.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 7 to 13 inches

## ***Neva Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountains, ridges

*Parent material:* Volcanic ash over loess and colluvium derived from metamorphic rock

*Slope range:* 35 to 70 percent

*Elevation:* 3,000 to 4,200 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-loamy, isotic, frigid Andic Haploxeralfs

### ***Typical Pedon***

Neva ashy silt loam, 35 to 70 percent slopes, about 7 miles east of Helmer, Idaho; about 1,400 feet north and 2,400 feet west of the southeast corner of section 22, T. 40 N., R. 1 E.; latitude 46 degrees, 47 minutes, 35 seconds north and longitude 116 degrees, 19 minutes, 8 seconds west; U.S. Geological Survey McGary Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 4 inches; dark grayish brown (10YR 4/2) ashy silt loam, very dark brown (7.5YR 2.5/2) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots throughout; few very fine tubular pores; slightly acid (pH 6.3); abrupt smooth boundary.

Bw1—4 to 8 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine roots



- throughout; few very fine and fine tubular pores; slightly acid (pH 6.5); clear smooth boundary.
- Bw2—8 to 13 inches; brownish yellow (10YR 6/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots throughout; few very fine tubular pores; slightly acid (pH 6.5); abrupt wavy boundary.
- 2BE—13 to 25 inches; light yellowish brown (10YR 6/4) loam, brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure parting to moderate fine and medium subangular blocky; moderately hard, friable, nonsticky and moderately plastic; common very fine and fine roots between peds and common medium roots throughout; common very fine and fine and few coarse tubular pores; 8 percent faint silt coatings on faces of peds and in pores; 5 percent fine mica flakes; 2 percent gravel; slightly acid (pH 6.1); abrupt smooth boundary.
- 2Bt1—25 to 35 inches; light brown (7.5YR 6/4) loam, strong brown (7.5YR 4/6) moist; moderate fine and medium subangular blocky structure; moderately hard, friable, slightly sticky and moderately plastic; common very fine and few fine roots between peds; common very fine and fine and few coarse tubular pores; 5 percent prominent clay films on faces of peds and 5 percent distinct clay films in pores; 10 percent distinct silt coatings on faces of peds and in pores; 5 percent fine mica flakes; 2 percent gravel; moderately acid (pH 6.0); clear wavy boundary.
- 2Bt2—35 to 50 inches; 70 percent light yellowish brown (10YR 6/4) loam, strong brown (7.5YR 4/6) moist, and 30 percent yellowish brown (10YR 5/4) sandy clay loam, brown (7.5YR 4/4) moist; moderate medium and coarse subangular blocky structure; moderately hard, friable, slightly sticky and moderately plastic; common very fine and few fine roots between peds; common very fine tubular pores; 15 percent prominent clay films on faces of peds and in pores; 5 percent fine mica flakes; 3 percent gravel; moderately acid (pH 5.8); clear wavy boundary.
- 2BC—50 to 56 inches; very pale brown (10YR 7/4) loam, dark yellowish brown (10YR 4/6) moist; weak fine and medium subangular blocky structure; moderately hard, friable, nonsticky and slightly plastic; common very fine roots between peds; common very fine tubular pores; 10 percent prominent clay films in pores; 5 percent fine mica flakes; 5 percent gravel; moderately acid (pH 5.7); clear wavy boundary.
- 2C—56 to 62 inches; very pale brown (10YR 7/4) coarse sandy loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots throughout; 5 percent fine mica flakes; 8 percent gravel; moderately acid (pH 5.6).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 10 to 13 inches

## ***Newlig Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands

*Landform:* Terraces

*Parent material:* Mixed alluvium

*Slope range:* 5 to 20 percent

*Elevation:* 1,000 to 1,240 feet

*Mean annual precipitation:* 23 to 28 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine-loamy, mixed, superactive, mesic Pachic Ultic Argixerolls

### **Typical Pedon**

Newlig silt loam, 5 to 20 percent slopes, about 3 miles southeast of Orofino, Idaho; about 2,000 feet north and 2,500 feet east of the southwest corner of section 21, T. 36 N., R. 2 E.; latitude 46 degrees, 26 minutes, 53 seconds north and longitude 116 degrees, 12 minutes, 40 seconds west; U.S. Geological Survey Orofino East Quadrangle.

A1—0 to 3 inches; dark brown (10YR 3/3) silt loam, very dark brown (10YR 2/2) moist; strong very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; common very fine irregular pores and common very fine and few fine tubular pores; moderately acid (pH 5.8); abrupt smooth boundary.

A2—3 to 11 inches; brown (10YR 4/3) silt loam, very dark brown (7.5YR 2.5/2) moist; moderate very fine, fine, and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine, medium, and coarse roots; common very fine tubular and irregular pores; slightly acid (pH 6.3); clear wavy boundary.

A3—11 to 18 inches; yellowish brown (10YR 5/4) silt loam, very dark brown (7.5YR 2.5/3) moist; moderate very fine, fine, and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine, medium, and coarse roots; many very fine and few fine tubular pores; slightly acid (pH 6.3); clear wavy boundary.

AB—18 to 22 inches; yellowish brown (10YR 5/4) very fine sandy loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; many very fine and few fine tubular pores; slightly acid (pH 6.3); clear wavy boundary.

Bt1—22 to 30 inches; pale brown (10YR 6/3) loam, very dark brown (7.5YR 2.5/3) moist; strong medium and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine and few fine and medium roots; many very fine and few fine and medium tubular pores; common faint clay films lining pores and on faces of peds; slightly acid (pH 6.4); clear wavy boundary.

Bt2—30 to 43 inches; pale brown (10YR 6/3) clay loam, very dark brown (7.5YR 2.5/3) moist; strong medium and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; many very fine and few fine and medium tubular pores; common faint clay films lining pores and on faces of peds; slightly acid (pH 6.3); gradual wavy boundary.

Bt3—43 to 55 inches; yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 3/4) moist; moderate fine, medium, and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine and few fine tubular pores; few faint clay bridges between sand grains; slightly acid (pH 6.4); clear wavy boundary.

BC—55 to 65 inches; yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; slightly acid (pH 6.4).

### **Range in Characteristics**

*Thickness of mollic epipedon:* 20 to 31 inches

## **Noil Series**

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Loess and volcanic ash over colluvium over residuum derived from metamorphic rock

*Slope range:* 20 to 85 percent

*Elevation:* 1,600 to 4,200 feet

*Mean annual precipitation:* 25 to 50 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Loamy-skeletal, isotic, frigid Vitrandic Haploxerepts

### **Typical Pedon**

Noil ashy loam in an area of Noil-Boulder Creek-Rock outcrop complex, 45 to 85 percent slopes, about 18 miles north and 2 miles west of Headquarters, Idaho; about 1,500 south and 1,500 feet east of the northwest corner of section 17, T. 41 N., R. 5 E.; latitude 46 degrees, 54 minutes, 5 seconds north and longitude 115 degrees, 51 minutes, 45 seconds west; U.S. Geological Survey Little Goat Mountains Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A1—1 to 3 inches; very dark grayish brown (10YR 3/2) ashy loam, very dark brown (10YR 2/2) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots throughout; many very fine irregular pores; 2 percent fine mica flakes; 10 percent gravel; slightly alkaline (pH 7.5); clear smooth boundary.

A2—3 to 9 inches; dark grayish brown (10YR 4/2) gravelly ashy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium granular structure; soft, friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; 2 percent fine mica flakes; 20 percent gravel and 5 percent cobbles; neutral (pH 7.0); clear wavy boundary.

Bw1—9 to 19 inches; yellowish brown (10YR 5/4) very gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium granular structure; soft, friable, nonsticky and nonplastic; many fine and medium and few coarse roots throughout; common very fine and fine irregular pores; 3 percent fine mica flakes; 25 percent gravel and 15 percent cobbles; slightly acid (pH 6.5); clear wavy boundary.

Bw2—19 to 29 inches; light yellowish brown (10YR 6/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak very fine and fine subangular blocky structure; soft, friable, nonsticky and nonplastic; common very fine and fine roots throughout; common very fine irregular pores; 5 percent fine mica flakes; 40 percent gravel and 25 percent cobbles; slightly acid (pH 6.2); clear irregular boundary.

C1—29 to 37 inches; light yellowish brown (10YR 6/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; single grain; loose, very friable, nonsticky and nonplastic; common very fine and few fine roots throughout; common very fine irregular pores; 2 percent fine mica flakes; 50 percent gravel, 25 percent cobbles, and 5 percent flagstones; slightly acid (pH 6.2); clear wavy boundary.

C2—37 to 43 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak very fine and fine subangular blocky structure parting to single grain; soft, friable, nonsticky and nonplastic; few very fine roots throughout and few medium roots in cracks; few very fine irregular pores; 4 percent fine mica flakes; 40 percent gravel, 15 percent cobbles, and 10 percent flagstones; moderately acid (pH 6.0); clear wavy boundary.

Cr—43 inches; weathered schist.

***Range in Characteristics***

*Depth to weathered bedrock:* 40 to 60 inches

***Norwidge Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains, plateaus

*Landform:* Hillslopes, mountain slopes

*Parent material:* Volcanic ash over loess and/or reworked loess

*Slope range:* 5 to 25 percent

*Elevation:* 2,800 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands

***Typical Pedon***

Norwidge medial silt loam in an area of Norwidge-Threebear complex, 5 to 25 percent slopes, about 10 miles north of Ahsahka, Idaho; about 200 feet south and 2,500 feet east of the northwest corner of section 10, T. 38 N., R. 1 E.; latitude 46 degrees, 39 minutes, 23 seconds north and longitude 116 degrees, 19 minutes, 9 seconds west; U.S. Geological Survey Aldermand Ridge Quadrangle.

Oi—0 to 3 inches; slightly decomposed plant material.

A—3 to 6 inches; brown (7.5YR 4/3) medial silt loam, very dark brown (7.5YR 2.5/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; many very fine and fine and common medium roots; many very fine and fine and common medium and coarse irregular pores; 5 percent fine iron-manganese concretions; slightly acid (pH 6.2); abrupt wavy boundary.

Bw1—6 to 9 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak very fine subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and slightly plastic; many very fine and fine and common medium, coarse, and very coarse roots; many very fine, common fine and medium, and few coarse irregular pores; moderately acid (pH 6.0); clear wavy boundary.

Bw2—9 to 17 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak very fine subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and slightly plastic; many very fine and fine and common medium, coarse, and very coarse roots; many very fine, common fine and medium, and few coarse irregular pores; moderately acid (pH 6.0); abrupt wavy boundary.

2Bt/E1—17 to 27 inches; 75 percent B part that is brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist, and 25 percent E part that is pale brown (10YR 6/3) silt loam, light yellowish brown (10YR 6/4) moist; weak medium prismatic structure

parting to strong medium and coarse subangular blocky; hard, firm, slightly sticky and slightly plastic; common very fine and fine and few medium roots between peds; many very fine and common fine tubular pores and common very fine irregular pores; common faint dark brown (7.5YR 3/4) clay films on faces of peds and in pores; 5 percent fine iron-manganese concretions; slightly acid (pH 6.2); gradual wavy boundary.

2Bt/E2—27 to 33 inches; 80 percent B part that is light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 3/4) moist, and 20 percent E part that is pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; weak medium prismatic structure parting to strong medium and coarse subangular blocky; hard, firm, slightly sticky and slightly plastic; common very fine and fine roots between peds; many very fine, common fine, and few medium tubular pores; many faint dark yellowish brown (10YR 3/4) clay films on faces of peds and in pores; 2 percent fine iron-manganese concretions; moderately acid (pH 6.0); gradual wavy boundary.

3Bt1—33 to 42 inches; yellowish brown (10YR 5/4) silty clay loam, dark yellowish brown (10YR 3/4) moist; moderate medium prismatic structure parting to strong medium and coarse subangular blocky; very hard, firm, moderately sticky and moderately plastic; common very fine and few fine roots between peds; many very fine, common fine, and few medium tubular pores; many distinct dark yellowish brown (10YR 3/4) clay films on faces of peds and in pores; many faint very pale brown (10YR 7/3) uncoated silt grains on faces of peds and in pores; 2 percent fine iron-manganese concretions; 5 percent of peds are brittle when moist; moderately acid (pH 6.0); gradual wavy boundary.

3Bt2—42 to 56 inches; yellowish brown (10YR 5/4) silt loam, dark yellowish brown (10YR 3/4) moist; moderate medium prismatic structure parting to strong medium and coarse subangular blocky; very hard, firm, moderately sticky and moderately plastic; common very fine and few fine roots between peds; many very fine and few fine and medium tubular pores; many faint clay films that are dark yellowish brown (10YR 3/4) moist and on faces of peds and in pores; many faint uncoated silt grains that are light yellowish brown (10YR 6/4) moist and on faces of peds and in pores; 5 percent fine iron-manganese concretions; 10 percent of peds are brittle when moist; moderately acid (pH 6.0); clear wavy boundary.

3Btx1—56 to 67 inches; yellowish brown (10YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse prismatic structure; very hard, very firm, moderately sticky and moderately plastic; common very fine and fine roots between peds; many very fine and few fine and medium tubular pores; many distinct clay films that are dark yellowish brown (10YR 3/4) moist and are on faces of peds and in pores; few faint uncoated silt grains that are pale brown (10YR 6/3) moist and are on faces of peds and in pores; 10 percent fine iron-manganese concretions; 30 percent of peds are brittle when moist; moderately acid (pH 6.0); gradual wavy boundary.

3Btx2—67 to 81 inches; yellowish brown (10YR 5/4) silty clay loam, dark brown (7.5YR 3/4) moist; moderate medium and coarse prismatic structure; very hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots between peds; many very fine and few fine tubular pores; many faint clay films that are dark yellowish brown (10YR 3/4) moist and are on faces of peds and in pores; few faint uncoated silt grains that are pale brown (10YR 6/3) moist and are on faces of peds and in pores; 10 percent fine iron-manganese concretions; 40 percent of peds are brittle when moist; moderately acid (pH 6.0).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 16 inches

*Depth to fragic characteristics:* 30 to 57 inches



## **Odonnell Series**

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Foothills, mountains

*Landform:* Hills, mountain slopes, structural benches

*Parent material:* Volcanic ash over silty alluvium, reworked loess, and/or colluvium derived from gneiss, anorthosite, and/or schist

*Slope range:* 10 to 35 percent

*Elevation:* 1,600 to 4,400 feet

*Mean annual precipitation:* 40 to 65 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over mixed, active, frigid Alfic Udivitrands

### **Typical Pedon**

Odonnell medial silt loam ([fig. 23](#)) in an area of Odonnell-Grandad complex, 10 to 35 percent slopes, about 8 miles north and 12.5 miles east of Elk River, Idaho; about 1,100 feet south and 840 feet east of the northwest corner of section 13, T. 41 N., R. 4 E.; latitude 46 degrees, 54 minutes, 9 seconds north and longitude 115 degrees, 54 minutes, 26 seconds west; U.S. Geological Survey Pinchot Butte Quadrangle.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 5 inches; brown (7.5YR 4/3) medial silt loam, dark brown (7.5YR 3/3) moist; weak fine granular structure; many very fine, fine, and medium roots throughout; many very fine and fine irregular pores and few fine and medium tubular pores; 2 percent fine rounded iron-manganese concretions; moderately acid (pH 6.0); abrupt wavy boundary.

Bw—5 to 16 inches; brown (7.5YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots throughout; many very fine and fine irregular pores and few medium tubular pores; 2 percent rounded iron-manganese concretions; trace amount of fine mica flakes; moderately acid (pH 5.9); abrupt wavy boundary.

2E—16 to 25 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; strong fine and medium subangular blocky structure; hard, firm, slightly sticky and moderately plastic; few medium roots throughout and common very fine and fine roots between peds; common very fine and fine irregular pores and common medium and coarse tubular pores; 5 percent rounded iron-manganese concretions; 5 percent fine mica flakes; moderately acid (pH 5.8); clear wavy boundary.

2B/E—25 to 44 inches; 60 percent yellowish brown (10YR 5/4) silt loam, dark brown (7.5YR 3/4) moist, and 40 percent very pale brown (10YR 7/4) silt loam, dark yellowish brown (10YR 4/6) moist; strong fine and medium subangular blocky structure; very hard, very firm, slightly sticky and moderately plastic; few very fine, fine, and coarse roots between peds; common very fine and fine irregular pores and common fine tubular pores; common distinct clay films on faces of peds and in pores; 5 percent rounded iron-manganese concretions; 10 percent fine mica flakes; 2 percent gravel; moderately acid (pH 5.7); abrupt wavy boundary.

2Btb1—44 to 56 inches; brown (7.5YR 5/4) silt loam, strong brown (7.5YR 4/6) moist; moderate medium prismatic structure parting to strong medium and coarse subangular blocky; very hard, very firm, slightly sticky and moderately plastic; few very fine and fine roots between peds; common very fine and fine irregular pores





**Figure 23.—Typical profile of an Odonnell soil. The volcanic ash mantle is between depths of 3 and 17 inches (A and Bw horizons). The ochric epipedon is between depths of 3 and 7 inches (A horizon). The cambic horizon is between depths of 7 and 17 inches (Bw horizon). The albic horizon is between depths of 17 and 19 inches (E horizon). The argillic horizon is between depths of 19 and 53 inches (2Bt/E, 2E/Btb, and 2Btb horizons). The particle-size control section is between depths of 3 and 43 inches (A, Bw, 2E, 2Bt/E, and 2E/Btb horizons and part of 2Btb horizon).**

and few fine tubular pores; many distinct clay films on faces of peds and in pores; many distinct skeletons on faces of peds and in pores; few prominent iron stains on faces of peds; 10 percent fine mica flakes; 2 percent gravel; moderately acid (pH 5.6); clear wavy boundary.

2Btb2—56 to 64 inches; brown (7.5YR 5/4) silt loam, strong brown (7.5YR 4/6) moist; moderate medium and coarse subangular blocky structure parting to strong fine and medium subangular blocky; very hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots between peds; common very fine

and fine irregular pores and few fine tubular pores; many prominent clay films on faces of peds; many prominent skeletons on faces of peds and in pores; common prominent iron stains on faces of peds; 5 percent fine mica flakes; 2 percent gravel; strongly acid (pH 5.5).

***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 18 inches

*Depth to seasonal high perched water table:* 4 to 36 inches in December through April

***Oxyaquic Xerofluvents***

*Depth class:* Very deep

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* High

*Landscape:* Canyonlands

*Landform:* Flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 5 percent

*Elevation:* 920 to 2,800 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Oxyaquic Xerofluvents

***Typical Pedon***

Oxyaquic Xerofluvents fine sandy loam in an area of Oxyaquic Xerofluvents-Itzee complex, 0 to 5 percent slopes, about 1 mile north and 2 miles west of Orofino, Idaho; about 1,200 feet south and 2,400 feet west of the northeast corner of section 2, T. 36 N., R. 1 E.; latitude 46 degrees, 29 minutes, 46 seconds north and longitude 116 degrees, 17 minutes, 35 seconds west; U.S. Geological Survey Orofino West Quadrangle.

- A1—0 to 2 inches; yellowish brown (10YR 5/4) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; common very fine tubular pores; 15 percent fine mica flakes; strongly acid (pH 5.5); clear wavy boundary.
- A2—2 to 6 inches; light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/4), variegated fine sandy loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; common very fine tubular pores; 15 percent fine mica flakes; strongly acid (pH 5.5); clear wavy boundary.
- C1—6 to 12 inches; very pale brown (10YR 7/4), light yellowish brown (10YR 6/4), and black (10YR 2/1), variegated loamy fine sand, dark brown (10YR 3/3) moist; few fine prominent strong brown (7.5YR 4/6) redoximorphic concentrations; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and few medium and coarse roots throughout; common very fine tubular pores; 15 percent fine mica flakes; moderately acid (pH 5.6); abrupt wavy boundary.
- C2—12 to 14 inches; very pale brown (10YR 7/3), yellowish brown (10YR 5/4), and black (10YR 2/1), variegated loamy fine sand, dark yellowish brown (10YR 3/4) moist; common fine and medium distinct dark yellowish brown (10YR 4/6) redoximorphic concentrations; weak very fine and fine subangular blocky structure;

## Soil Survey of Clearwater Area, Idaho

- soft, very friable, nonsticky and nonplastic; many very fine roots throughout; few very fine tubular pores; 15 percent fine mica flakes; strongly acid (pH 5.5); abrupt wavy boundary.
- C3—14 to 17 inches; light yellowish brown (10YR 6/4), very pale brown (10YR 7/3), and yellowish brown (10YR 5/6), variegated fine sandy loam, brown (10YR 4/3) moist; common fine and medium distinct dark yellowish brown (10YR 4/6) redoximorphic concentrations; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine roots throughout; few very fine tubular pores; 20 percent fine mica flakes; strongly acid (pH 5.5); abrupt wavy boundary.
- Ab—17 to 18 inches; pale brown (10YR 6/3) very fine sandy loam, dark brown (10YR 3/3) moist; common fine prominent strong brown (7.5YR 4/6) redoximorphic concentrations; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots throughout; common very fine interstitial pores; 10 percent fine mica flakes; strongly acid (pH 5.5); abrupt wavy boundary.
- C'1—18 to 23 inches; very pale brown (10YR 7/4), light yellowish brown (10YR 6/4), and brownish yellow (10YR 6/6), variegated loamy fine sand, dark yellowish brown (10YR 3/4) moist; many medium and coarse and common fine distinct dark yellowish brown (10YR 4/6) redoximorphic concentrations; weak very fine and fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine roots throughout; common very fine interstitial pores; 15 percent fine mica flakes; strongly acid (pH 5.5); clear wavy boundary.
- C'2—23 to 30 inches; very pale brown (10YR 7/4), light yellowish brown (10YR 6/4), and brownish yellow (10YR 6/6), variegated loamy fine sand, brown (10YR 4/3) moist; common fine distinct dark yellowish brown (10YR 4/6) redoximorphic concentrations; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots throughout; common very fine interstitial pores and few very fine tubular pores; 15 percent fine mica flakes; moderately acid (pH 5.7); clear wavy boundary.
- C'3—30 to 39 inches; very pale brown (10YR 7/4), light yellowish brown (10YR 6/4), and white (10YR 8/1), variegated loamy fine sand, dark yellowish brown (10YR 4/4) moist; common medium and coarse prominent strong brown (7.5YR 4/6) redoximorphic concentrations; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine roots throughout; common very fine interstitial pores and few very fine tubular pores; 15 percent fine mica flakes; moderately acid (pH 5.9); abrupt wavy boundary.
- Ab'—39 to 41 inches; pale brown (10YR 6/3) very fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine roots throughout; common very fine interstitial pores and few very fine tubular pores; 20 percent fine mica flakes; moderately acid (pH 6.0); abrupt wavy boundary.
- C"1—41 to 54 inches; very pale brown (10YR 7/4 and 10YR 7/3) fine sandy loam, brown (10YR 4/3) moist; common medium and coarse distinct dark yellowish brown (10YR 4/6) and few fine prominent yellowish red (5YR 4/6) redoximorphic concentrations; massive; loose, very friable, nonsticky and nonplastic; few very fine and coarse roots throughout; common very fine interstitial pores and few very fine tubular pores; 20 percent fine mica flakes; slightly acid (pH 6.3); clear wavy boundary.
- C"2—54 to 60 inches or more; very pale brown (10YR 7/4 and 10YR 7/3) very cobbly loamy sand, brown (10YR 4/3) moist; massive; loose, very friable, nonsticky and nonplastic; few very fine roots throughout; many very fine interstitial pores and few very fine tubular pores; 15 percent gravel, 25 percent cobbles, and 5 percent stones; slightly acid (pH 6.3).

### ***Range in Characteristics***

*Depth to seasonal high apparent water table:* At the surface to a depth of 19 inches in February and March

*Flooding:* Occasional, brief periods in February through May

### ***Placer Series***

*Depth class:* Deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Volcanic ash over residuum derived from basalt

*Slope range:* 15 to 40 percent

*Elevation:* 3,000 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-loamy, isotic, frigid Vitrandic Hapludalfs

### ***Typical Pedon***

Placer ashy loam in an area of Placer-Dowper-Grangemont complex, 15 to 40 percent slopes, about 5 miles north and 4 miles west of Weippe, Idaho; about 2,550 feet south and 1,850 feet west of the northeast corner of section 24, T. 36 N., R. 3 E.; latitude 46 degrees, 26 minutes, 57 seconds north and longitude 116 degrees, 1 minute, 17 seconds west; U.S. Geological Survey Rudo Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 5 inches; reddish brown (5YR 5/4) ashy loam, reddish brown (5YR 4/4) moist; moderate fine granular structure; soft, very friable, slightly sticky and nonplastic; many very fine and fine and few medium roots; common very fine tubular pores and many very fine and common fine irregular pores; 5 percent fine rounded iron-manganese concretions; 4 percent paragravel; neutral (pH 6.9); clear smooth boundary.

BA—5 to 10 inches; reddish brown (5YR 5/4) ashy loam, dark reddish brown (5YR 3/4) moist; moderate medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and medium roots; many very fine tubular pores and many very fine and common fine irregular pores; 4 percent fine rounded iron-manganese concretions; 3 percent paragravel; slightly acid (pH 6.5); clear wavy boundary.

2Bt1—10 to 20 inches; brown (7.5YR 5/4) loam, reddish brown (5YR 3/4) moist; moderate medium subangular blocky structure parting to weak fine granular; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; many very fine tubular and irregular pores; few faint clay films lining pores and on faces of peds; 4 percent fine rounded iron-manganese concretions; 3 percent paragravel; slightly acid (pH 6.5); clear wavy boundary.

2Bt2—20 to 31 inches; brown (7.5YR 5/4) paragravelly loam, dark brown (7.5YR 3/4) moist; moderate medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine tubular pores and many very fine and fine irregular pores; few faint clay films lining pores and on faces of peds; 30 percent paragravel; slightly acid (pH 6.2); clear wavy boundary.



- 2BC—31 to 52 inches; dark brown (7.5YR 4/4) extremely paracobbly loam, reddish brown (5YR 4/4) moist, moderate fine subangular blocky structure parting to weak fine granular; soft, friable, slightly sticky and moderately plastic; common very fine and few fine roots; few very fine tubular pores and many very fine and fine irregular pores; 30 percent paragravel and 45 percent paracobbles; moderately acid (pH 6.0); abrupt wavy boundary.
- 2Cr—52 inches; highly fractured, weathered basalt.

***Range in Characteristics***

*Depth to weathered basalt:* 40 to 60 inches

***Poorman Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 15 to 75 percent

*Elevation:* 2,000 to 4,400 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Coarse-loamy, paramicaceous, frigid Andic Hapludalfs

***Typical Pedon***

Poorman ashy loam, 35 to 65 percent slopes, about 4 miles north and 6 miles west of Pierce, Idaho; about 2,200 feet south and 2,600 feet west of the northeast corner of section 10, T. 37 N., R. 4 E.; latitude 46 degrees, 33 minutes, 54 seconds north and longitude 115 degrees, 56 minutes, 13 seconds west; U.S. Geological Survey Whiskey Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 3 inches; brown (7.5YR 4/3) ashy loam, very dark brown (7.5YR 2.5/3) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; soft, very friable, slightly sticky and nonplastic; common very fine and few fine roots; many very fine, common fine, and few medium irregular pores; slightly acid (pH 6.2); abrupt wavy boundary.

Bw1—3 to 9 inches; yellowish brown (10YR 5/4) ashy loam, dark brown (7.5YR 3/4) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, common fine, and few medium and coarse roots; many very fine and few fine and medium irregular pores; 2 percent fine mica flakes; moderately acid (pH 6.0); clear wavy boundary.

Bw2—9 to 13 inches; light yellowish brown (10YR 6/4) ashy loam, dark brown (7.5YR 3/4) moist; weak very fine, fine, and medium subangular blocky structure parting to moderate fine granular; soft, very friable, slightly sticky and nonplastic; many very fine, common fine, and few medium and coarse roots; many very fine and few fine and medium irregular pores; 10 percent fine mica flakes; moderately acid (pH 5.9); abrupt wavy boundary.

2Bt1—13 to 21 inches; brown (10YR 5/3) loam, dark brown (10YR 4/3) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine, medium, and coarse roots; many very fine and few fine tubular pores and common very fine

- irregular pores; few faint clay films on faces of peds and lining pores; 50 percent fine mica flakes; moderately acid (pH 5.8); clear wavy boundary.
- 2Bt2—21 to 29 inches; pale brown (10YR 6/3) loam, dark yellowish brown (10YR 4/4) moist; weak fine, medium, and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; common very fine tubular pores and many very fine and few fine irregular pores; few faint clay films lining pores; 55 percent fine mica flakes; 2 percent gravel; moderately acid (pH 5.7); diffuse wavy boundary.
- 2BC—29 to 36 inches; light yellowish brown (10YR 6/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; common very fine irregular pores and few very fine and fine tubular pores; 65 percent fine mica flakes; 10 percent gravel and 5 percent cobbles; strongly acid (pH 5.5); clear wavy boundary.
- 2C1—36 to 52 inches; light yellowish brown (10YR 6/4) sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; few very fine, fine, and medium roots; common very fine and few fine irregular pores; 80 percent fine mica flakes; 1 percent gravel and 2 percent cobbles; moderately acid (pH 5.7); clear wavy boundary.
- 2C2—52 to 61 inches; very pale brown (10YR 8/4) sandy loam, brownish yellow (10YR 6/6) moist; massive; slightly hard, very friable, nonsticky and slightly plastic; few very fine, fine, and medium roots; few very fine irregular pores and few fine tubular pores; 50 percent fine mica flakes; 5 percent gravel; strongly acid (pH 5.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 9 to 13 inches

## ***Reggear Series***

*Depth class:* Moderately deep to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Canyonlands, plateaus

*Landform:* Hills, including hillslopes; structural benches

*Parent material:* Volcanic ash over loess

*Slope range:* 2 to 20 percent

*Elevation:* 1,600 to 3,800 feet

*Mean annual precipitation:* 25 to 45 inches

*Mean annual air temperature:* 38 to 45 degrees F

*Frost-free period:* 50 to 125 days

*Taxonomic class:* Fine-silty, mixed, active, frigid Vitrandic Fraglossudalfs

### ***Typical Pedon***

Reggear ashy silt loam in an area of Reggear-Seddow complex, 5 to 15 percent slopes, about 1.5 miles north of Weippe, Idaho; about 1,200 feet north and 2,400 feet west of the southeast corner of section 3, T. 35 N., R. 4 E.; latitude 46 degrees, 24 minutes, 5 seconds north and longitude 115 degrees, 56 minutes, 28 seconds west; U.S. Geological Survey Weippe North Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 8 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; moderate fine and medium subangular blocky structure parting to strong fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine,



## Soil Survey of Clearwater Area, Idaho

- fine, medium, and coarse roots; many very fine and fine tubular pores; slightly acid (pH 6.5); clear smooth boundary.
- Bw—8 to 13 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, medium, and coarse roots; many very fine, common fine, and few medium tubular pores; neutral (pH 6.8); abrupt wavy boundary.
- 2E—13 to 22 inches; light gray (10YR 7/2) silt loam, yellowish brown (10YR 5/4) moist; weak fine and medium prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, and medium and common coarse roots; many very fine and common fine tubular pores; 5 percent of horizon has continuous faint clay films on vertical faces of peds; slightly acid (pH 6.4); clear wavy boundary.
- 2B/E—22 to 31 inches; B material is light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist, and E material is light gray (10YR 7/2) silt loam, yellowish brown (10YR 5/4) moist; moderate medium prismatic structure parting to moderate medium subangular blocky; hard, firm, moderately sticky and moderately plastic; many very fine, common fine, and few medium roots; many very fine and fine and few medium tubular pores; continuous prominent clay films lining pores and continuous distinct clay films on faces of peds; thick coatings of E material on 60 percent of faces of peds; moderately acid (pH 5.8); abrupt wavy boundary.
- 2Btx1—31 to 41 inches; very pale brown (10YR 7/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate coarse prismatic structure parting to moderate medium and coarse subangular blocky; very hard, very firm and brittle, moderately sticky and moderately plastic; roots flattened on faces of peds; many very fine and fine and common medium vesicular and tubular pores; continuous prominent clay films lining pores and continuous distinct clay films on faces of peds; few fine dark organic stains on faces of peds; iron stains on faces of peds between E and B material; coatings of E material on faces of prisms; tongues of E material 0.10 to 0.75 inch thick between prisms; very strongly acid (pH 5.0); clear smooth boundary.
- 2Btx2—41 to 60 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; weak coarse prismatic structure parting to weak coarse subangular blocky; extremely hard, extremely firm and brittle, slightly sticky and slightly plastic; many very fine and fine and few medium tubular and vesicular pores; continuous distinct clay films lining pores and continuous faint clay films on faces of peds; few fine dark-colored organic stains on faces of peds; very strongly acid (pH 4.5); clear smooth boundary.
- 3Btx3—60 to 86 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; weak coarse prismatic structure; extremely hard, extremely firm and brittle, moderately sticky and moderately plastic; many very fine and fine and common medium tubular and vesicular pores; continuous prominent clay films lining pores and continuous distinct clay films on faces of peds; very thin coatings of E material; very strongly acid (pH 4.8).

### ***Range in Characteristics***

*Depth to seasonal high perched water table:* 18 to 34 inches in November through July

*Depth to the fragipan:* 20 to 40 inches

### ***Rettig Series***

*Depth class:* Very deep

*Drainage class:* Well drained

## Soil Survey of Clearwater Area, Idaho

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from gneiss, schist, and/or mica schist

*Slope range:* 15 to 90 percent

*Elevation:* 1,600 to 5,000 feet

*Mean annual precipitation:* 35 to 60 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphous over paramicaceous, frigid Typic Udivitrands

### **Typical Pedon**

Rettig ashy loam ([fig. 24](#)) in an area of Rettig-Grandad complex, 35 to 70 percent slopes, about 13 miles north and 5 miles east of Headquarters, Idaho; about 1,000 feet south and 100 feet east of the northwest corner of section 9, T. 40 N., R. 6 E.; latitude 46 degrees, 49 minutes, 48 seconds north and longitude 115 degrees, 43 minutes, 14 seconds west; U.S. Geological Survey Thompson Point Quadrangle.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 7 inches; brown (10YR 4/3) ashy loam, very dark brown (10YR 2/2) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots throughout; many very fine and fine irregular pores; 3 percent fine mica flakes; 8 percent gravel; moderately acid (pH 5.7); clear wavy boundary.

Bw1—7 to 16 inches; yellowish brown (10YR 5/4) ashy loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots throughout; many very fine and fine irregular pores and common very fine tubular pores; 2 percent fine mica flakes; 5 percent gravel; slightly acid (pH 6.1); clear wavy boundary.

Bw2—16 to 27 inches; yellowish brown (10YR 5/4) ashy loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores and common very fine tubular pores; 8 percent fine mica flakes; 10 percent gravel; slightly acid (pH 6.2); abrupt wavy boundary.

2Bw3—27 to 34 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots on surfaces of peds and few medium roots throughout; common very fine irregular and tubular pores; 20 percent fine mica flakes; 20 percent gravel; moderately acid (pH 5.7); clear wavy boundary.

2Bw4—34 to 47 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots on surfaces of peds and few medium roots throughout; common very fine irregular and tubular pores; 30 percent fine mica flakes; 15 percent gravel and 2 percent cobbles; moderately acid (pH 5.8); clear wavy boundary.

2BC—47 to 63 inches; light yellowish brown (10YR 6/4) gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few fine roots on surfaces of peds and few medium and coarse roots throughout; common very fine irregular



**Figure 24.—Typical profile of a Rettig soil. The volcanic ash mantle is between depths of 1 and 27 inches (A and Bw horizons). The ochric epipedon is between depths of 1 and 7 inches (A horizon). The cambic horizon is between depths of 7 and 47 inches (Bw and 2Bw horizons). The particle-size control section is between depths of 1 and 41 inches (A, Bw, and 2Bw3 horizons and part of 2Bw4 horizon).**

pores and common fine tubular pores; 25 percent fine mica flakes; 30 percent gravel and 2 percent cobbles; strongly acid (pH 5.4); abrupt wavy boundary.  
2C—63 to 66 inches; light olive brown (2.5Y 5/4) very gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots throughout; few very fine tubular pores; 50 percent fine mica flakes; 40 percent gravel and 10 percent cobbles; moderately acid (pH 5.9).

#### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 26 inches

## **Revling Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Volcanic ash over alluvium and/or lacustrine deposits

*Slope range:* 5 to 40 percent

*Elevation:* 3,000 to 3,550 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over mixed, active, frigid Alfic  
Udivitrands

### **Typical Pedon**

Revling ashy silt loam in an area of Jaype-Revling complex, 5 to 40 percent slopes, about 4 miles east of Grangemont, Idaho; about 1,250 feet south and 1,500 feet east of the northwest corner of section 22, T. 37 N., R. 4 E.; latitude 46 degrees, 32 minutes, 21 seconds north and longitude 115 degrees, 56 minutes, 30 seconds west; U.S. Geological Survey Whiskey Butte Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 7 inches; yellowish brown (10YR 5/4) ashy silt loam, dark yellowish brown (10YR 3/4) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few coarse roots; many very fine irregular pores; 3 percent fine rounded iron-manganese concretions; 1 percent fine mica flakes; 1 percent fine gravel; neutral (pH 7.2); abrupt wavy boundary.

Bw1—7 to 12 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots; many very fine and fine irregular pores; 3 percent fine rounded iron-manganese concretions; 1 percent fine mica flakes; few fine charcoal pieces; neutral (pH 7.0); clear wavy boundary.

Bw2—12 to 21 inches; light brown (7.5YR 6/4) ashy loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure parting to very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and common coarse roots; many very fine and fine irregular pores; 3 percent fine rounded iron-manganese concretions; 1 percent fine mica flakes; few fine charcoal pieces; neutral (pH 6.9); abrupt wavy boundary.

2Bt—21 to 35 inches; light brown (7.5YR 6/3) sandy clay loam, dark brown (7.5YR 3/4) moist; moderate coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine and medium and few coarse roots on faces of peds and common very fine roots throughout; common very fine and fine irregular pores and few medium tubular pores; common faint clay films on faces of peds and lining pores; 10 percent thin angular iron-cemented fragments; 1 percent fine mica flakes; 10 percent fine gravel; slightly acid (pH 6.2); abrupt wavy boundary.

3Btb1—35 to 50 inches; light brown (7.5YR 6/4) and very pale brown (10YR 7/4) sandy clay loam, yellowish brown (10YR 5/6) and light yellowish brown (10YR 6/4) moist; moderate medium and coarse prismatic structure; hard, firm, moderately sticky and moderately plastic; common medium and coarse roots on faces of peds and few very fine roots throughout; common very fine and fine tubular pores;



## Soil Survey of Clearwater Area, Idaho

- common yellowish brown (10YR 5/4) prominent clay films on faces of peds; 2 percent fine mica flakes; strongly acid (pH 5.4); clear smooth boundary.
- 3Btb2—50 to 73 inches; brownish yellow (10YR 6/6) and light gray (10YR 7/2) sandy clay loam, yellowish brown (10YR 5/6) moist; moderate medium and coarse prismatic structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine flattened roots on faces of peds; few very fine tubular pores; many yellowish brown (10YR 5/4) and strong brown (7.5YR 5/6) prominent clay films on faces of peds; 3 percent fine mica flakes; very strongly acid (pH 5.0); abrupt wavy boundary.
- 3Btb3—73 to 86 inches; brownish yellow (10YR 6/6) and very pale brown (10YR 7/4) loam, light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/6) moist; moderate medium and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine irregular pores; many grayish brown (10YR 5/2) and light brownish gray (10YR 6/2) prominent clay films on faces of peds; 3 percent fine mica flakes; very strongly acid (pH 5.0).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 20 inches

### ***Riswold Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons; escarpments; hills, including hillslopes; structural benches

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 5 to 70 percent

*Elevation:* 1,600 to 3,500 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Andic Hapludalfs

### ***Typical Pedon***

Riswold ashy silt loam in an area of Elkridge-Riswold complex, 40 to 70 percent slopes, about 8.5 miles north of Ahsahka, Idaho; about 3,000 feet north and 700 feet east of the southwest corner of section 22, T. 38 N., R. 1 E.; latitude 46 degrees, 37 minutes, 20 seconds north and longitude 116 degrees, 19 minutes, 34 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 9 inches; yellowish brown (10YR 5/4) ashy silt loam, dark yellowish brown (10YR 3/4) moist; weak fine subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and nonplastic; many very fine, fine, and medium roots; many very fine irregular pores; 5 percent gravel; neutral (pH 6.8); clear smooth boundary.

Bw—9 to 17 inches; light yellowish brown (10YR 6/4) ashy silt loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, fine, and medium and few coarse roots; many very fine irregular pores; 5 percent gravel; slightly acid (pH 6.5); clear wavy boundary.

2E/B—17 to 27 inches; E part is pale brown (10YR 6/3) silt loam, brown (10YR 5/3) moist, and B part is brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist;

moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, fine, and medium and few coarse roots; many very fine and fine tubular pores and many very fine irregular pores; common faint clay films on faces of peds and lining pores; few faint clean silt coatings on faces of peds; 5 percent gravel; slightly acid (pH 6.4); clear wavy boundary.

2B/E1—27 to 37 inches; B part is brown (10YR 5/3) silt loam, dark brown (10YR 4/3) moist, and E part is very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; weak fine prismatic structure parting to moderate fine subangular blocky; slightly hard, firm, moderately sticky and slightly plastic; common very fine and fine roots; many very fine and fine tubular pores and common very fine irregular pores; many faint and few distinct clay films on faces of peds and lining pores; few fine uncoated silt grains on faces of peds; 10 percent gravel; slightly acid (pH 6.4); gradual wavy boundary.

2B/E2—37 to 44 inches; B part is brown (10YR 5/3) gravelly silt loam, dark brown (10YR 4/3) moist, and E part is very pale brown (10YR 7/3) gravelly silt loam, brown (10YR 5/3) moist; moderate fine prismatic structure; hard, firm, moderately sticky and slightly plastic; common very fine and fine roots; many very fine and fine tubular pores and common very fine irregular pores; common distinct clay films on faces of peds and lining pores; common uncoated silt grains on faces of peds; 15 percent gravel; slightly acid (pH 6.2); gradual wavy boundary.

3Bt1—44 to 60 inches; brown (10YR 5/3) cobbly silty clay loam, dark brown (10YR 4/3) moist; moderate fine and medium prismatic structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; many very fine and fine and few medium tubular pores and many very fine irregular pores; many distinct clay films on faces of peds and lining pores; common uncoated silt grains on faces of peds; 10 percent gravel and 10 percent cobbles; slightly acid (pH 6.2); clear smooth boundary.

3Bt2—60 to 72 inches; pale brown (10YR 6/3) very cobbly silty clay loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; few very fine, fine, and coarse roots; many very fine and fine and few medium tubular pores and many very fine irregular pores; many distinct clay films on faces of peds and lining pores; few fine uncoated silt grains on faces of peds; 15 percent gravel and 40 percent cobbles; moderately acid (pH 5.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 10 to 23 inches

### ***Scaler Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over loess over colluvium derived from schist and/or gneiss

*Slope range:* 15 to 45 percent

*Elevation:* 1,800 to 3,500 feet

*Mean annual precipitation:* 30 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Andic Hapludalfs



***Typical Pedon***

Scaler ashy silt loam, 15 to 35 percent slopes, about 5 miles north of Grangemont, Idaho; about 750 feet south and 900 feet east of the northwest corner of section 36, T. 38 N., R. 3 E.; latitude 46 degrees, 35 minutes, 54 seconds north and longitude 116 degrees, 1 minute, 36 seconds west; U.S. Geological Survey Grangemont Quadrangle.

Oe—0 to 1 inch; moderately decomposed plant material.

A—1 to 2 inches; yellowish brown (10YR 5/4) ashy silt loam, very dark brown (7.5YR 2.5/2) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine roots throughout; many very fine and fine irregular pores; neutral (pH 6.7); abrupt wavy boundary.

Bw—2 to 11 inches; yellowish brown (10YR 5/4) ashy silt loam, dark brown (7.5YR 3/3) moist; weak fine and medium subangular blocky structure parting to weak very fine and fine granular; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots throughout; many very fine and fine irregular pores and many very fine tubular pores; slightly acid (pH 6.2); abrupt wavy boundary.

2E—11 to 18 inches; pale brown (10YR 6/3) silt loam, brown (7.5YR 5/3) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; many very fine and fine and few medium roots throughout; many very fine and fine irregular pores and common very fine and fine tubular pores; 20 percent fine mica flakes; moderately acid (pH 5.9); clear wavy boundary.

2E/B—18 to 30 inches; 70 percent E material that is very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist, and 30 percent B material that is very pale brown (10YR 7/4) silt loam, brown (7.5YR 4/4) moist; moderate medium and coarse prismatic structure parting to strong fine and medium subangular blocky; hard, friable, slightly sticky and moderately plastic; many very fine and fine roots between peds and few medium and coarse roots throughout; common very fine and fine irregular pores and many very fine and common fine tubular pores; 20 percent fine mica flakes; 3 percent gravel; moderately acid (pH 5.7); clear wavy boundary.

2B/E—30 to 40 inches; 60 percent B material that is very pale brown (10YR 7/4) loam, brown (7.5YR 4/4) moist, and 40 percent E material that is very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; moderate medium and coarse prismatic structure parting to strong fine and medium subangular blocky; hard, friable, slightly sticky and moderately plastic; many very fine and fine roots between peds and few medium and coarse roots throughout; common very fine and fine irregular pores and many very fine and common fine tubular pores; common distinct clay films in pores; 40 percent fine mica flakes; 5 percent paragravel and 5 percent gravel; strongly acid (pH 5.4); clear wavy boundary.

3Bt—40 to 48 inches; reddish yellow (7.5YR 7/6) paragravelly loam, strong brown (7.5YR 5/6) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots between peds; common very fine irregular pores and many very fine and common fine tubular pores; common distinct clay films in pores; common distinct skeletons on faces of peds; 35 percent fine mica flakes; 25 percent paragravel; strongly acid (pH 5.4); clear wavy boundary.

3C—48 to 65 inches; 70 percent very pale brown (10YR 7/4) and 30 percent very pale brown (10YR 8/3) very paragravelly loamy sand, 70 percent brown (7.5YR 5/4) and 30 percent reddish yellow (7.5YR 8/6) moist; massive; hard, friable, nonsticky and nonplastic; common very fine and fine and few medium roots throughout;

common very fine and fine irregular pores; 60 percent fine mica flakes; 40 percent paragravel as seams of weathered schist; strongly acid (pH 5.4).

***Range in Characteristics***

*Thickness of volcanic ash mantle:* 7 to 14 inches

***Scand Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Volcanic ash over loess over colluvium derived from mica schist and/or gneiss

*Slope range:* 20 to 50 percent

*Elevation:* 2,800 to 3,500 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands

***Typical Pedon***

Scand ashy silt loam ([fig. 25](#)) in an area of Scaler-Grandad complex, 35 to 60 percent slopes; Latah County, Idaho; about 6 miles northeast of Southwick, Idaho; about 1,200 feet north and 2,450 feet east of the southwest corner of section 29, T. 39 N., R. 1 E.; latitude 46 degrees, 41 minutes, 28 seconds north and longitude 116 degrees, 21 minutes, 45 seconds west; U.S. Geological Survey Aldermant Ridge Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 4 inches; light brown (7.5YR 6/4) ashy silt loam, brown (7.5YR 4/4) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine roots throughout; many very fine and fine irregular pores; moderately acid (pH 5.7); clear wavy boundary.

Bw—4 to 16 inches; light brown (7.5YR 6/3) ashy silt loam, brown (7.5YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; moderately acid (pH 5.8); abrupt wavy boundary.

2Bt1—16 to 21 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; moderate fine subangular blocky structure parting to weak fine subangular blocky; slightly hard, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; few faint clay films on faces of peds; 10 percent fine mica flakes; 5 percent gravel; strongly acid (pH 5.5); clear wavy boundary.

2Bt2—21 to 27 inches; light yellowish brown (10YR 6/4) silt loam, yellowish brown (10YR 5/4) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine to medium roots throughout; common very fine and fine irregular and tubular pores; few faint clay films on faces of peds; 20 percent fine mica flakes; 5 percent gravel; very strongly acid (pH 4.9); clear wavy boundary.



**Figure 25.—Typical profile of a Scand soil. The volcanic ash mantle extends from the surface of the mineral soil material to a depth of 16 inches (A and Bw horizons). The ochric epipedon extends from the surface of the mineral soil material to a depth of 7 inches (A horizon and part of Bw horizon). The cambic horizon is between depths of 4 and 16 inches (Bw horizon). The argillic horizon is between depths of 16 and 53 inches (2Bt and 2Bt horizons). The particle-size control section extends from the surface of the mineral soil material to a depth of 41 inches (A, Bw, 2Bt, and 3Bt3 horizons and part of 3Bt4 horizon).**

3Bt3—27 to 38 inches; light yellowish brown (10YR 6/4) loam, dark yellowish brown (10YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; common very fine and fine roots throughout; common very fine and fine irregular and tubular pores; common faint clay films on faces of peds; 35 percent fine mica flakes; 10 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

3Bt4—38 to 45 inches; light brown (7.5YR 6/4) loam, brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky

and nonplastic; few very fine and fine roots throughout; common very fine and fine irregular and tubular pores; many distinct dark brown (7.5YR 3/4) clay films on faces of peds; 40 percent fine mica flakes; 10 percent gravel; strongly acid (pH 5.1); clear wavy boundary.

3Bt5—45 to 53 inches; brown (7.5YR 5/4) loam, brown (7.5YR 4/4) moist; moderate medium subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots throughout; common very fine and fine irregular and tubular pores; many distinct dark brown (7.5YR 3/4) clay films on faces of peds; 50 percent fine mica flakes; 10 percent gravel; very strongly acid (pH 5.0); clear wavy boundary.

3BC—53 to 63 inches; strong brown (7.5YR 5/6) loamy sand, strong brown (7.5YR 4/6) moist; weak medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few very fine and fine roots throughout; common very fine and fine irregular and tubular pores; 55 percent fine mica flakes; 10 percent gravel; strongly acid (pH 5.1).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 19 inches

### ***Seddow Series***

*Depth class:* Deep to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Hillslopes, structural benches

*Parent material:* Volcanic ash and loess and/or colluvium derived from basalt

*Slope range:* 3 to 50 percent

*Elevation:* 1,100 to 3,800 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Vitrandic Haploxeralfs

### ***Typical Pedon***

Seddow ashy silt loam in an area of Carlinton-Seddow complex, 3 to 15 percent slopes, about 0.5 mile north and 3 miles west of Weippe, Idaho; about 900 feet north and 2,000 feet east of the southwest corner of section 7, T. 35 N., R. 4 E.; latitude 46 degrees, 23 minutes, 9 seconds north and longitude 116 degrees, 0 minutes, 30 seconds west; U.S. Geological Survey Rudo Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 3 inches; grayish brown (10YR 5/2) ashy silt loam, dark brown (7.5YR 3/2) moist; moderate very fine, fine, and medium granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; 3 percent gravel; neutral (pH 7.0); clear smooth boundary.

Bw—3 to 5 inches; pale brown (10YR 6/3) ashy silt loam, dark brown (7.5YR 3/3) moist; weak very fine, fine, and medium subangular blocky structure; soft, very friable, slightly sticky and nonplastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; 3 percent gravel; moderately acid (pH 5.8); clear smooth boundary.

2Bt1—5 to 13 inches; dark yellowish brown (10YR 4/4) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine prismatic structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic;



common very fine, fine, and medium roots; common very fine and fine tubular pores; common faint clay films lining pores and on faces of peds; 5 percent iron-manganese concretions; 7 percent gravel; moderately acid (pH 5.8); gradual smooth boundary.

2Bt2—13 to 23 inches; dark yellowish brown (10YR 4/4) silt loam, brown (10YR 4/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; common very fine and fine tubular pores; common distinct clay films lining pores and on faces of peds; 5 percent iron-manganese concretions; 7 percent gravel; moderately acid (pH 5.6); gradual smooth boundary.

2Bt3—23 to 35 inches; dark yellowish brown (10YR 4/4) silt loam, brown (10YR 4/3) moist; weak medium and coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine, fine, and medium roots; common very fine and fine tubular pores; many distinct clay films lining pores and on faces of peds; 5 percent iron-manganese concretions; 7 percent gravel; moderately acid (pH 5.6); gradual smooth boundary.

3Bt4—35 to 44 inches; dark yellowish brown (10YR 4/4) very gravelly silt loam, brown (10YR 4/3) moist; weak medium and coarse subangular blocky structure; hard, firm, moderately sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; common distinct clay films lining pores and on faces of peds; 25 percent gravel and 15 percent cobbles; moderately acid (pH 5.6); abrupt irregular boundary.

3R—44 inches; basalt.

### ***Range in Characteristics***

*Depth to basalt:* 40 to 60 inches

## ***Setters Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 3 to 20 percent

*Elevation:* 1,200 to 3,100 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine, smectitic, frigid Ultic Palexerolls

### ***Typical Pedon***

Setters silt loam ([fig. 26](#)) in an area of Taney-Setters complex, 3 to 8 percent slopes, about 4 miles west of Weippe, Idaho; about 1,300 feet north and 1,200 feet west of the southeast corner of section 18, T. 35 N., R. 4 E.; latitude 46 degrees, 22 minutes, 22 seconds north and longitude 116 degrees, 0 minutes, 0 seconds west; U.S. Geological Survey Weippe South Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A1—2 to 7 inches; dark grayish brown (10YR 4/2) silt loam, black (10YR 2/1) moist; strong fine granular structure; slightly hard, friable, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots; many very fine and fine irregular pores and few very fine tubular pores; neutral (pH 6.8); clear smooth boundary.



**Figure 26.—Typical profile of a Setters soil. The mollic epipedon extends from the surface to a depth of 16 inches (A and B horizons). The albic horizon is between depths of 16 and 17 inches (E horizon). The argillic horizon is between depths of 17 and 60 inches (Btb horizon). The particle-size control section is between depths of 17 and 37 inches (part of Bt horizon).**

- A2—7 to 15 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to strong fine granular; slightly hard, friable, slightly sticky and nonplastic; many very fine, fine, medium, and coarse roots; many very fine and fine irregular pores and common very fine and fine tubular pores; neutral (pH 6.6); clear wavy boundary.
- Bt—15 to 28 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium and coarse roots; few fine irregular pores and common very fine and fine and few medium tubular pores; few faint clay films on faces of peds and common faint clay films in pores; few faint silt coatings on vertical faces of peds; moderately acid (pH 6.0); gradual wavy boundary.



E—28 to 34 inches; light gray (10YR 7/2) silt loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, slightly sticky and nonplastic; many very fine and fine and common medium and coarse roots; few fine irregular pores and common fine and medium tubular pores; 10 percent fine rounded iron-manganese concretions; moderately acid (pH 5.7); abrupt wavy boundary.

Btb1—34 to 50 inches; strong brown (7.5YR 4/6) silty clay, dark brown (7.5YR 3/4) moist; strong coarse prismatic structure; very hard, very firm, very sticky and very plastic; common very fine and fine somewhat flattened roots along prism faces and few fine roots in matrix; common fine tubular pores; many prominent clay films on faces of peds and in pores; 2-inch-long by 0.5-inch-wide tongues of albic material in horizon; few faint iron-manganese coatings on faces of peds; 15 percent fine rounded iron-manganese concretions; moderately acid (pH 6.0); abrupt wavy boundary.

Btb2—50 to 62 inches; light yellowish brown (10YR 6/4) silty clay loam, yellowish brown (10YR 5/4) moist; strong medium prismatic structure parting to strong medium platy; very hard, somewhat brittle, very sticky and moderately plastic; few fine flattened roots along prism faces; common fine and medium tubular pores; many prominent clay films on faces of peds and common distinct clay films in pores; 10 percent very fine pockets of silt; slightly acid (pH 6.3).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 12 to 16 inches

*Depth to seasonal high perched water table:* At the surface to a depth of 32 inches in November through July

*Flooding:* Occasional, brief periods in November through July

## ***Shattuck Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from quartzite

*Slope range:* 15 to 65 percent

*Elevation:* 1,800 to 5,500 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy-skeletal, amorphic over isotic, frigid Ultic Udivitrands

### ***Typical Pedon***

Shattuck ashy silt loam, 15 to 35 percent slopes, about 6 miles north and 3 miles west of Ahsahka, Idaho; about 2,490 feet south and 800 feet east of the northwest corner of section 31, T. 38 N., R. 1 E.; latitude 46 degrees, 35 minutes, 13 seconds north and longitude 116 degrees, 23 minutes, 25 seconds west; U.S. Geological Survey Southwick Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 7 inches; yellowish brown (10YR 5/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium and coarse roots; many very fine and fine irregular pores; slightly acid (pH 6.5); gradual smooth boundary.

## Soil Survey of Clearwater Area, Idaho

- Bw1—7 to 14 inches; brownish yellow (10YR 6/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and few coarse roots; many very fine and fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.
- Bw2—14 to 19 inches; brownish yellow (10YR 6/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few coarse roots; many very fine and fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.
- 2Bt1—19 to 30 inches; light reddish brown (5YR 6/3) gravelly clay loam, reddish brown (5YR 4/3) moist; moderate coarse subangular blocky structure; hard, firm, moderately sticky and slightly plastic; few coarse roots; many very fine and fine and few medium irregular pores and few fine tubular pores; few faint clay films lining pores; common silt coatings on faces of peds; 20 percent gravel; medium acid (pH 5.9); gradual wavy boundary.
- 2Bt2—30 to 44 inches; light reddish brown (5YR 6/3) extremely cobbly clay loam, reddish brown (5YR 4/4) moist; moderate coarse subangular blocky structure; hard, firm, moderately sticky and slightly plastic; common medium roots; many very fine and fine irregular pores and many very fine and fine and few medium tubular pores; common faint clay films lining pores; few silt coatings on faces of peds; 20 percent gravel, 40 percent cobbles, and 10 percent stones; strongly acid (pH 5.5); gradual wavy boundary.
- 2BC—44 to 63 inches; reddish yellow (5YR 6/6) extremely cobbly clay loam, yellowish red (5YR 5/6) moist; massive; hard, firm, moderately sticky and slightly plastic; few medium roots; many very fine and fine irregular pores; few faint clay films lining pores; 20 percent gravel, 30 percent cobbles, and 10 percent stones; strongly acid (pH 5.4).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 21 inches

### ***Sly Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, plateaus

*Landform:* Hillslopes, rims, structural benches

*Parent material:* Volcanic ash over loess over colluvium derived from basalt

*Slope range:* 3 to 35 percent

*Elevation:* 1,900 to 2,900 feet

*Mean annual precipitation:* 28 to 35 inches

*Mean annual air temperature:* 38 to 45 degrees F

*Frost-free period:* 50 to 125 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Vitrandic Hapludalfs

### ***Typical Pedon***

Sly ashy silt loam in an area of Sly-Wilkins complex, 3 to 15 percent slopes, about 4.5 miles east of Orofino, Idaho; about 2,500 feet south and 1,950 feet west of the northeast corner of section 13, T. 36 N., R. 2 E.; latitude 46 degrees, 27 minutes, 48 seconds north and longitude 116 degrees, 9 minutes, 0 seconds west; U.S. Geological Survey Orofino East Quadrangle.

Oi—0 to 4 inches; slightly decomposed plant material.

A—4 to 8 inches; dark brown (10YR 3/3) ashy silt loam, very dark brown (10YR 2/2) moist; weak fine and medium granular structure; soft, very friable, slightly sticky

- and slightly plastic; many very fine and fine roots throughout; many very fine and fine irregular pores; neutral (pH 6.8); clear smooth boundary.
- Bw—8 to 15 inches; pale brown (10YR 6/3) ashy silt loam, brown (10YR 4/3) moist; moderate fine and very fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots throughout; many fine and very fine and few medium irregular pores; neutral (pH 6.6); clear smooth boundary.
- B/E—15 to 19 inches; B part is brown (10YR 5/3) silt loam, brown (10YR 4/3) moist, and E part is pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots throughout; many fine and medium irregular pores and few fine tubular pores; slightly acid (pH 6.5); clear wavy boundary.
- Bt1—19 to 28 inches; yellowish brown (10YR 5/4) silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; common very fine and fine and few coarse roots along faces of peds and few very fine roots throughout; common fine and very fine tubular pores and few very fine and fine irregular pores; slightly acid (pH 6.4); gradual smooth boundary.
- Bt2—28 to 37 inches; yellowish brown (10YR 5/4) silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, firm, moderately sticky and moderately plastic; many distinct dark yellowish brown (10YR 3/4) clay films on faces of peds and in pores; few distinct manganese or iron-manganese stains on faces of peds; common fine and medium roots along faces of peds and common very fine roots throughout; common fine and very fine tubular pores; 5 percent gravel; slightly acid (pH 6.4); gradual smooth boundary.
- C—37 to 66 inches; yellowish brown (10YR 5/4) cobbly clay loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; many distinct dark yellowish brown (10YR 3/4) clay films on faces of peds and in pores; common distinct skeletons on faces of peds; common distinct manganese or iron-manganese stains on faces of peds; few very fine and fine roots along faces of peds and few very fine roots throughout; common very fine and fine tubular pores; 1 percent fine iron-manganese flakes; 10 percent gravel and 15 percent cobbles; moderately acid (pH 6.2).

## **Southwick Series**

*Depth class:* Moderately deep to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Plateaus

*Landform:* Hillslopes

*Parent material:* Loess

*Slope range:* 3 to 20 percent

*Elevation:* 1,700 to 3,400 feet

*Mean annual precipitation:* 23 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Fine-silty, mixed, superactive, mesic Oxyaquic Argixerolls

### ***Typical Pedon***

Southwick silt loam, 3 to 12 percent slopes ([fig. 27](#)), about 3 miles south and 0.25 mile west of Orofino, Idaho; about 150 feet south and 650 feet west of the northeast corner of section 36, T. 36 N., R. 1 E.; latitude 46 degrees, 25 minutes, 38 seconds north and longitude 116 degrees, 15 minutes, 57 seconds west; U.S. Geological Survey Orofino West Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 11 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, slightly sticky and



**Figure 27.**—Typical profile of a Southwick soil. The mollic epipedon is between depths of 1.5 and 25.0 inches (A and Bw horizons). The albic horizon is between depths of 25 and 33 inches and has chroma of at least 3 when moist (E horizon). The argillic horizon is between depths of 33 and 71 inches (Btb horizon). The particle-size control section is between depths of 33 and 53 inches (Btb1 horizon and part of Btb2 horizon). The oxyaquic feature begins at a depth of 25 inches and represents the part of the soil that is saturated with water for 30 cumulative days or more.



moderately plastic; many very fine and fine and common medium and coarse roots throughout; many very fine and fine irregular pores; neutral (pH 6.6); clear smooth boundary.

Bt—11 to 17 inches; brown (10YR 5/3) silt loam, dark brown (7.5YR 3/3) moist; weak fine and medium subangular blocky structure parting to weak very fine subangular blocky; slightly hard, very friable, slightly sticky and moderately plastic; many very fine and fine and few medium roots throughout; many very fine and fine irregular pores and common very fine tubular pores; common faint dark brown (7.5YR 4/2) clay films on faces of peds; slightly acid (pH 6.3); clear smooth boundary.

E—17 to 26 inches; 80 percent pale brown (10YR 6/3) and 20 percent brown (10YR 5/3) silt loam, dark brown (7.5YR 4/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots throughout; common fine irregular pores and common very fine tubular pores; common distinct dark brown (7.5YR 4/2) clay films on faces of peds; few faint brown (7.5YR 5/2) skeletalans on faces of peds; slightly acid (pH 6.3); abrupt smooth boundary.

2Btxb/E1—26 to 36 inches; 60 percent B part that is strong brown (7.5YR 4/6) silty clay loam, dark brown (7.5YR 4/4) moist, and 40 percent E part that is light gray (10YR 7/2) silt loam, brown (7.5YR 5/3) moist; moderate medium and coarse prismatic structure parting to moderate medium and coarse subangular blocky; hard, friable, moderately sticky and moderately plastic; common very fine and fine roots between prisms; many very fine tubular pores; many distinct dark brown (7.5YR 4/3) clay films on faces of peds; few distinct brown (7.5YR 5/3) skeletalans on faces of peds; few fine rounded iron-manganese concretions; brittle in the B material; slightly acid (pH 6.2); abrupt smooth boundary.

2Btxb/E2—36 to 44 inches; 90 percent B part that is strong brown (7.5YR 4/6) silty clay loam, dark brown (7.5YR 3/4) moist, and 10 percent E part that is light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate medium and coarse prismatic structure parting to moderate medium and coarse subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots between prisms; many very fine tubular pores; many distinct dark brown (7.5YR 3/3) clay films on faces of peds and in pores; few rounded iron-manganese concretions; brittle in the B material; slightly acid (pH 6.4); abrupt smooth boundary.

2Btxb—44 to 61 inches; strong brown (7.5YR 4/6) silty clay loam, dark brown (7.5YR 4/4) moist; strong medium and coarse prismatic structure parting to strong medium and coarse subangular blocky; very hard, extremely firm, moderately sticky and moderately plastic; few very fine roots between prisms; many very fine tubular pores; many prominent dark brown (7.5YR 3/3) clay films on faces of peds and in pores; many distinct black iron-manganese stains on faces of peds; common fine rounded iron-manganese concretions; 3 percent gravel; neutral (pH 6.8).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 16 to 30 inches

*Depth to seasonal high perched water table:* 18 to 36 inches in November through July

*Depth to fragic characteristics:* 20 to 50 inches

## ***Spacecreek Series***

*Depth class:* Very deep

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

## Soil Survey of Clearwater Area, Idaho

*Landscape:* Mountains

*Landform:* Terraces

*Parent material:* Volcanic ash over mixed alluvium

*Slope range:* 2 to 12 percent

*Elevation:* 2,800 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over isotic, frigid Oxyaquic  
Udivitrands

### **Typical Pedon**

Spacecreek medial silt loam in an area of Hildebrand-Spacecreek complex, 2 to 12 percent slopes, about 3 miles north and 1 mile west of Headquarters, Idaho; about 1,050 feet north and 2,150 feet east of the southwest corner of section 34, T. 39 N., R. 5 E.; latitude 46 degrees, 40 minutes, 35 seconds north and longitude 115 degrees, 49 minutes, 4 seconds west; U.S. Geological Survey Headquarters Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 10 inches; brown (10YR 4/3) medial silt loam, dark brown (7.5YR 3/4) moist; weak very fine and fine granular structure; very soft, very friable, nonsticky and nonplastic; many very fine and fine roots throughout; many very fine and fine irregular pores; 5 percent fine and medium iron-manganese concretions; moderately acid (pH 5.6); clear smooth boundary.

Bw—10 to 16 inches; yellowish brown (10YR 5/4) medial silt loam, brown (7.5YR 4/4) moist; weak fine and medium granular structure; very soft, friable, nonsticky and nonplastic; many very fine to medium roots throughout; many very fine and fine irregular pores; 5 percent very fine and fine iron-manganese concretions; moderately acid (pH 5.6); clear wavy boundary.

2Bt1—16 to 20 inches; light yellowish brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; common very fine to coarse roots along faces of peds; common very fine and fine irregular and tubular pores; common faint brown (10YR 4/3) clay films on faces of peds; 5 percent very fine mica flakes; moderately acid (pH 5.7); clear smooth boundary.

2Bt2—20 to 28 inches; very pale brown (10YR 7/4) loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium roots along faces of peds; common very fine tubular pores; common faint brown (10YR 4/3) clay films on faces of peds; 10 percent very fine mica flakes; very strongly acid (pH 4.8); clear smooth boundary.

2BC—28 to 42 inches; very pale brown (10YR 7/4) sandy loam, yellowish brown (10YR 5/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots along faces of peds; common very fine tubular pores; few fine faint dark yellowish brown (10YR 4/6) redoximorphic concentrations on faces of peds; 15 percent very fine mica flakes; strongly acid (pH 5.1); clear wavy boundary.

2C1—42 to 52 inches; very pale brown (10YR 8/4) loam, yellowish brown (10YR 5/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; few very fine roots along faces of peds; few very fine irregular and tubular pores; few fine faint dark yellowish brown (10YR 4/6) redoximorphic concentrations on faces of peds; 10 percent very fine mica flakes; strongly acid (pH 5.2); clear wavy boundary.



2C2—52 to 64 inches; very pale brown (10YR 8/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine roots along faces of peds; few very fine irregular pores; few faint dark yellowish brown (10YR 4/6) redoximorphic concentrations on faces of peds; 5 percent very fine mica flakes; very strongly acid (pH 4.7).

***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 24 inches

*Depth to seasonal high apparent water table:* 14 to 40 inches in January through April

***Statemeadow Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Hills, including hillslopes

*Parent material:* Volcanic ash and loess over colluvium derived from basalt

*Slope range:* 5 to 40 percent

*Elevation:* 2,800 to 3,200 feet

*Mean annual precipitation:* 30 to 45 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-silty, mixed, active, frigid Vitrandic Hapludalfs

***Typical Pedon***

Statemeadow ashy silt loam in an area of Statemeadow-Reggear complex, 5 to 15 percent slopes, about 4.5 miles south and 0.5 mile east of Weippe, Idaho; about 500 feet south and 2,500 feet east of the northwest corner of section 11, T. 34 N., R. 4 E.; latitude 46 degrees, 18 minutes, 32 seconds north and longitude 115 degrees, 55 minutes, 18 seconds west; U.S. Geological Survey Weippe South Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 2 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 3/4) moist; moderate very fine and fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots throughout; many very fine and fine irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.

Bw—2 to 9 inches; brown (7.5YR 5/4) ashy silt loam, dark brown (7.5YR 4/4) moist; moderate very fine, fine, and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine, common medium, and few coarse roots; many very fine and common fine tubular pores and many very fine irregular pores; slightly acid (pH 6.2); clear smooth boundary.

Bt1—9 to 14 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; weak medium prismatic structure parting to moderate medium subangular blocky; hard, very friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; many very fine and few fine tubular pores and few very fine irregular pores; few distinct clay films lining pores; moderately acid (pH 6.0); clear wavy boundary.

Bt2—14 to 31 inches; light brown (7.5YR 6/4) silt loam, brown (7.5YR 4/4) moist; weak medium and coarse prismatic structure parting to moderate medium subangular blocky; hard, very friable, slightly sticky and slightly plastic; few very fine, fine,

and medium roots; many very fine, common fine, and few medium tubular pores; common distinct clay films lining pores and few distinct clay films on faces of peds; moderately acid (pH 6.0); gradual wavy boundary.

2Btx—31 to 51 inches; brown (7.5YR 5/4) silt loam, dark brown (7.5YR 3/4) moist; weak medium and coarse prismatic structure parting to moderate fine and medium subangular blocky; 60 percent extremely hard and brittle and 40 percent hard and friable, slightly sticky and slightly plastic; few very fine and fine roots; many very fine, common fine and medium, and few coarse tubular pores; many prominent strong brown (7.5YR 4/6) clay films lining pores and few prominent clay films on faces of peds; slightly acid (pH 6.2); gradual wavy boundary.

2Bt—51 to 61 inches; brown (7.5YR 4/4) silty clay loam, dark brown (7.5YR 3/4) moist; moderate medium prismatic structure parting to moderate very fine, fine, and medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots; common very fine and fine and few medium and coarse tubular pores; many prominent strong brown (7.5YR 4/6) clay films lining pores and few prominent clay films on faces of peds; slightly acid (pH 6.2).

### ***Range in Characteristics***

*Depth to fragic characteristics:* 30 to 50 inches

### ***Stepoff Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes

*Parent material:* Volcanic ash over colluvium derived from granite and/or gneiss

*Slope range:* 15 to 65 percent

*Elevation:* 3,600 to 4,800 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over isotic, frigid Typic Udivitrands

### ***Typical Pedon***

Stepoff medial loam in an area of Rettig-Township-Stepoff complex, 35 to 70 percent slopes, about 18 miles north of Headquarters, Idaho; about 850 feet north and 200 feet east of the southwest corner of section 13, T. 41 N., R. 5 E.; latitude 46 degrees, 53 minutes, 37 seconds north and longitude 115 degrees, 47 minutes, 1 second west; U.S. Geological Survey Little Goat Mountain Quadrangle.

Oi—0 to 3 inches; slightly decomposed plant material.

A—3 to 8 inches; dark yellowish brown (10YR 4/4) medial loam, very dark brown (10YR 2/2) moist; weak fine and medium granular structure; very soft, very friable, nonsticky and slightly plastic; many very fine and fine roots throughout; many very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; 1 percent fine mica flakes; 5 percent gravel; very strongly acid (pH 5.0); clear smooth boundary.

Bw1—8 to 15 inches; yellowish brown (10YR 5/4) medial loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure parting to moderate fine and medium granular; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, medium, and coarse roots throughout; many very fine and fine irregular pores; 3 percent fine rounded iron-manganese concretions;

## Soil Survey of Clearwater Area, Idaho

- 2 percent fine mica flakes; 5 percent gravel; very strongly acid (pH 4.7); clear smooth boundary.
- Bw2—15 to 24 inches; yellowish brown (10YR 5/4) medial loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, fine, and medium and common coarse roots throughout; many very fine and fine irregular pores; 2 percent fine rounded iron-manganese concretions; 2 percent fine mica flakes; 10 percent gravel; very strongly acid (pH 4.7); clear smooth boundary.
- 2Bw3—24 to 32 inches; yellowish brown (10YR 5/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots throughout; common very fine and fine irregular pores and few very fine tubular pores; 4 percent fine mica flakes; 15 percent gravel; very strongly acid (pH 4.6); clear wavy boundary.
- 2Bw4—32 to 38 inches; yellowish brown (10YR 5/6) gravelly loam, dark yellowish brown (10YR 3/6) moist; moderate medium and coarse subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots on faces of peds and common very fine roots throughout; common very fine and fine irregular pores; 3 percent fine mica flakes; 15 percent gravel; very strongly acid (pH 4.7); gradual wavy boundary.
- 2Bw5—38 to 46 inches; yellowish brown (10YR 5/4) gravelly loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots on faces of peds and few very fine roots throughout; common very fine and fine irregular pores and few very fine tubular pores; 3 percent fine mica flakes; 10 percent gravel and 5 percent cobbles; very strongly acid (pH 4.8); clear wavy boundary.
- 2C—46 to 63 inches; light yellowish brown (10YR 6/4) very cobbly loam, yellowish brown (10YR 5/6) moist; moderate fine and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; few very fine roots throughout; few very fine irregular pores; 2 percent fine mica flakes; 30 percent gravel and 25 percent cobbles; very strongly acid (pH 4.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 18 to 25 inches

## **Swayne Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands, plateaus

*Landform:* Canyons, hills, structural benches in canyons

*Parent material:* Loess and/or alluvium derived from granite

*Slope range:* 10 to 55 percent

*Elevation:* 1,000 to 3,000 feet

*Mean annual precipitation:* 23 to 26 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine, smectitic, frigid Ultic Palexeralfs

### ***Typical Pedon***

Swayne silt loam in an area of Johnson-Swayne complex, 20 to 40 percent slopes, about 1 mile northeast of Ahsahka, Idaho; about 300 feet north and 150 feet west of

## Soil Survey of Clearwater Area, Idaho

the southeast corner of section 27, T. 37 N., R. 1 E.; latitude 46 degrees, 30 minutes, 57 seconds north and longitude 116 degrees, 18 minutes, 20 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A1—1 to 4 inches; brown (10YR 4/3) silt loam, dark brown (10YR 3/3) moist; weak fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine irregular pores; neutral (pH 6.6); clear wavy boundary.

A2—4 to 8 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to moderate fine and medium granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine and common medium roots; many very fine irregular pores and many very fine and common fine tubular pores; few faint clay films on faces of peds and lining pores; neutral (pH 6.6); clear wavy boundary.

BA—8 to 14 inches; yellowish brown (10YR 5/4) silty clay loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine, fine, and medium roots; many very fine and fine tubular pores; common faint clay films on faces of peds and lining pores; common silt coatings on faces of peds; slightly acid (pH 6.5); clear wavy boundary.

B/E—14 to 22 inches; B part is brown (7.5YR 5/4) silty clay loam, dark brown (7.5YR 3/4) moist, and E part is light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; many very fine and fine tubular pores and common very fine irregular pores; common faint clay films on faces of peds and lining pores; many faint silt coatings on faces of peds; slightly acid (pH 6.5); abrupt wavy boundary.

Bt1—22 to 39 inches; dark brown (7.5YR 4/4) silty clay loam, dark reddish brown (5YR 3/4) moist; moderate medium prismatic structure; very hard, very firm, very sticky and very plastic; few very fine and fine roots; common very fine and fine tubular pores; many prominent clay films on faces of peds and lining pores; roots concentrated along prism faces; iron-manganese stains on prism faces; slightly acid (pH 6.2); gradual wavy boundary.

Bt2—39 to 56 inches; brown (7.5YR 5/4) silty clay, dark brown (7.5YR 3/4) moist; weak fine prismatic structure parting to moderate fine and medium angular blocky; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores and few very fine irregular pores; common prominent and many distinct clay films on faces of peds and lining pores; slightly acid (pH 6.4); clear wavy boundary.

2Bt3—56 to 61 inches; brown (7.5YR 5/4) clay loam, dark brown (7.5YR 4/4) moist; weak fine prismatic structure parting to moderate fine angular blocky; hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; many distinct clay films on faces of peds and lining pores; neutral (pH 7.2).

### **Taney Series**

*Depth class:* Moderately deep to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Canyonlands, mountains, plateaus

*Landform:* Hillslopes, mountain slopes, structural benches

*Parent material:* Volcanic ash and/or loess

*Slope range:* 3 to 35 percent

## Soil Survey of Clearwater Area, Idaho

*Elevation:* 1,800 to 3,600 feet

*Mean annual precipitation:* 24 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-silty, mixed, superactive, frigid Vitrandic Argixerolls

### **Typical Pedon**

Taney ashy silt loam, 3 to 10 percent slopes (fig. 28), about 2 miles north and 3 miles west of Ahsahka, Idaho; about 2,640 feet north and 100 feet west of the southeast corner of section 24, T. 37 N., R. 1 W.; latitude 46 degrees, 32 minutes, 9 seconds north and longitude 116 degrees, 23 minutes, 19 seconds west; U.S. Geological Survey Southwick Quadrangle.

Ap—0 to 7 inches; brown (10YR 5/3) ashy silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to weak fine granular; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium roots; many very fine and fine tubular pores; slightly acid (pH 6.4); clear wavy boundary.

A—7 to 10 inches; grayish brown (10YR 5/2) ashy silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium roots; many very fine and fine tubular pores; moderately acid (pH 6.0); clear wavy boundary.

Bw1—10 to 19 inches; pale brown (10YR 6/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium roots; many very fine and fine and common medium tubular pores; moderately acid (pH 5.9); clear wavy boundary.

Bw2—19 to 24 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 3/3) moist; moderate medium and coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common fine and medium roots; many very fine and fine and common medium tubular pores; moderately acid (pH 5.8); clear wavy boundary.

Eb—24 to 31 inches; very pale brown (10YR 7/4) silt loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few fine and medium roots; many very fine and fine tubular pores; moderately acid (pH 5.6); abrupt wavy boundary.

Btxb1—31 to 39 inches; light yellowish brown (10YR 6/4) silty clay loam, yellowish brown (10YR 5/4) moist; moderate medium prismatic structure parting to moderate fine and medium angular blocky; hard, firm, moderately sticky and moderately plastic; few fine and medium roots; common very fine and fine tubular pores; common distinct clay films on faces of peds and in pores; slightly acid (pH 6.1); gradual wavy boundary.

Btxb2—39 to 60 inches; pale brown (10YR 6/3) silty clay loam, yellowish brown (10YR 5/4) moist; moderate coarse prismatic structure; hard, firm, moderately sticky and moderately plastic; few fine and medium roots; common very fine and fine tubular pores; many distinct clay films on faces of peds and in pores; slightly acid (pH 6.2).

### **Range in Characteristics**

*Thickness of mollic epipedon:* 10 to 20 inches

*Depth to seasonal high perched water table:* 16 to 37 inches in November through July

*Depth to the fragipan:* 28 to 37 inches



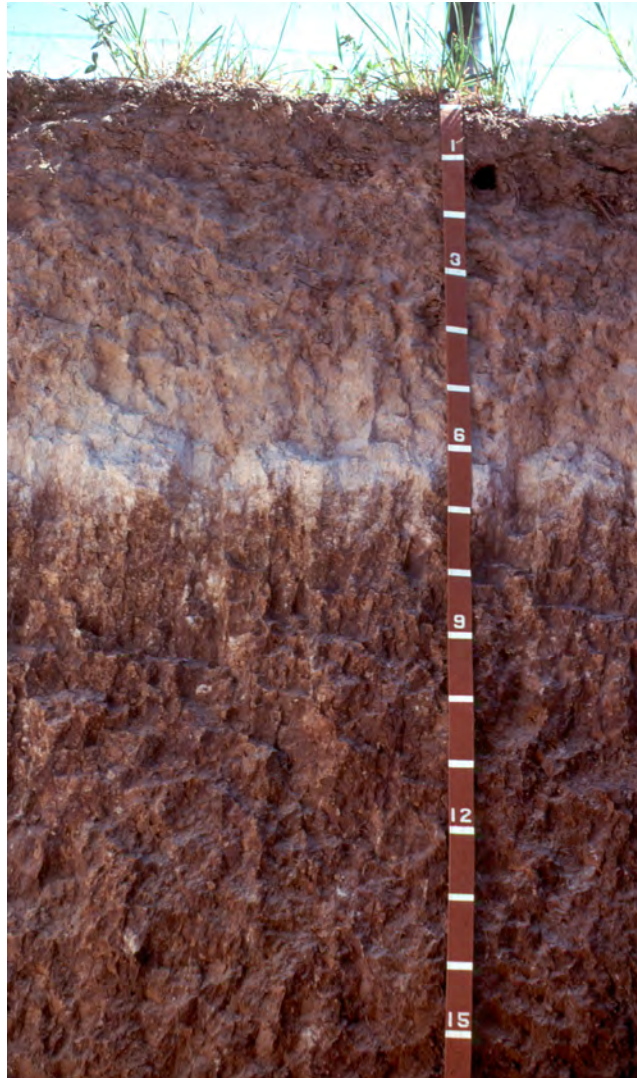


Figure 28.—Typical profile of a Taney soil. The vitrandic feature extends from the surface to a depth of 18 inches. The mollic epipedon extends from the surface of the mineral soil material to a depth of 18 inches (A horizon). The albic horizon is between depths of 25 and 28 inches and has chroma of at least 3 when moist (E horizon). The argillic horizon is between depths of 28 and 62 inches (Btxcb, Btxb, and Btcb horizons). The fragipan is between depths of 28 and 45 inches (Btxcb and Btxb horizons). The particle-size control section is between depths of 10 and 28 inches (part of A3 horizon, and Bwc and Ec horizons). The oxyaquic feature begins at a depth of 25 inches and represents the part of the soil that is saturated with water for 30 cumulative days or more).

### ***Teakean Series***

*Depth class:* Deep to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Mountains

*Landform:* Mountain slopes



## Soil Survey of Clearwater Area, Idaho

*Parent material:* Loess over loamy colluvium derived from metamorphic rock

*Slope range:* 20 to 50 percent

*Elevation:* 2,000 to 3,800 feet

*Mean annual precipitation:* 25 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-loamy, mixed, superactive, frigid Vitrandic Palexeralfs

### **Typical Pedon**

Teakean ashy silt loam, 35 to 50 percent slopes, about 4 miles east of Southwick, Idaho; about 1,000 feet south and 1,700 feet east of the northwest corner of section 25, T. 38 N., R. 1 W.; latitude 46 degrees, 36 minutes, 43 seconds north and longitude 116 degrees, 24 minutes, 22 seconds west; U.S. Geological Survey Southwick Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A1—1 to 8 inches; light brown (7.5YR 6/4) ashy silt loam, brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium and common coarse roots; many very fine and fine irregular pores and few fine tubular pores; 10 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

A2—8 to 13 inches; light brown (7.5YR 6/5) ashy silt loam, dark brown (7.5YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many fine and medium and common coarse roots; many very fine, fine, and medium irregular pores and few fine tubular pores; 10 percent gravel; moderately acid (pH 6.0); clear wavy boundary.

Bt1—13 to 19 inches; light brown (7.5YR 6/4) silt loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure; slightly hard, firm, moderately sticky and slightly plastic; common fine, medium, and coarse roots; common very fine and fine irregular pores and few fine tubular pores; few faint clay films on faces of peds; 10 percent gravel; moderately acid (pH 5.8); clear smooth boundary.

Bt2—19 to 23 inches; reddish yellow (7.5YR 6/6) silty clay loam, dark reddish brown (5YR 3/4) moist; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common fine and medium roots; common very fine and fine irregular pores; common faint clay films on faces of peds; few very pale brown (10YR 7/3) silt coatings on faces of peds; 10 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

B/E—23 to 42 inches; reddish yellow (5YR 6/6) gravelly clay loam, dark reddish brown (5YR 3/4) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common fine roots; common very fine, fine, and medium irregular pores; common distinct clay films on faces of peds; many very pale brown (10YR 7/3) silt coatings on faces peds; 15 percent gravel; moderately acid (pH 5.8); gradual wavy boundary.

Btx1—42 to 50 inches; yellowish red (5YR 5/6) gravelly clay loam, yellowish red (5YR 4/6) moist; weak fine prismatic structure parting to moderate fine subangular blocky; hard, firm and brittle, very sticky and very plastic; common fine roots flattened and matted on faces of peds; common very fine and fine irregular pores; common very pale brown (10YR 7/3) silt coatings on faces of peds; 20 percent gravel; moderately acid (pH 5.6); clear wavy boundary.

Btx2—50 to 61 inches; yellowish red (5YR 5/6) gravelly clay loam, yellowish red (5YR 4/6) moist; weak medium prismatic structure; very hard, very firm and brittle, very sticky and very plastic; common fine roots flattened and matted on faces of peds; common very fine and fine irregular pores; many prominent clay films on faces of

pedes and lining pores; iron stains on faces of pedes; 20 percent gravel; moderately acid (pH 5.8).

### ***Range in Characteristics***

*Depth to seasonal high perched water table:* 16 to 28 inches in December through April

*Depth to the fragipan:* 40 to 60 inches

## ***Teneb Series***

*Depth class:* Very deep

*Drainage class:* Poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Plateaus

*Landform:* Drainageways, flood plains

*Parent material:* Mixed alluvium

*Slope range:* 0 to 2 percent

*Elevation:* 2,900 to 3,400 feet

*Mean annual precipitation:* 32 to 40 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Fine-silty, mixed, active, frigid Aquandic Epiaqualfs

### ***Typical Pedon***

Teneb ashy silt loam, 0 to 2 percent slopes, about 7 miles north and 1 mile west of Weippe, Idaho; about 2,200 feet south and 2,600 feet east of the northwest corner of section 9, T. 36 N., R. 4 E.; latitude 46 degrees, 28 minutes, 38 seconds north and longitude 115 degrees, 57 minutes, 45 seconds west; U.S. Geological Survey Weippe North Quadrangle.

A—0 to 2 inches; dark brown (10YR 3/3) ashy silt loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium roots; many very fine and fine and few medium irregular pores; slightly acid (pH 6.2); abrupt smooth boundary.

AB—2 to 7 inches; dark grayish brown (10YR 4/2) ashy silt loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine subangular blocky structure parting to strong very fine and fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine and fine irregular pores; few fine prominent redoximorphic concentrations that are dark brown (7.5YR 3/3) moist; moderately acid (pH 5.8); clear smooth boundary.

Bg—7 to 15 inches; grayish brown (10YR 5/2) silty clay loam, dark gray (2.5Y 4/1) moist; strong very fine and fine subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; many very fine roots; common very fine and fine tubular and irregular pores; many fine and medium prominent redoximorphic concentrations that are dark yellowish brown (10YR 4/6) moist and are in interior of pedes; strongly acid (pH 5.2); clear wavy boundary.

Btg—15 to 24 inches; light brownish gray (10YR 6/2) silty clay loam, dark gray (10YR 4/1) moist; moderate very fine and fine subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine, fine, and medium tubular pores and common very fine irregular pores; many fine prominent redoximorphic concentrations that are strong brown (7.5YR 5/6) moist; few faint clay films lining pores and on faces of pedes; very strongly acid (pH 5.0); abrupt wavy boundary.

- EB—24 to 27 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; weak very fine and fine subangular blocky structure; very hard, very firm, slightly sticky and slightly plastic; common very fine roots; common very fine and fine tubular pores and few very fine irregular pores; common fine prominent redoximorphic concentrations that are dark brown (7.5YR 4/4) moist; few faint clay films lining pores and on faces of peds; very strongly acid (pH 4.9); abrupt wavy boundary.
- BE—27 to 34 inches; pale brown (10YR 6/3) silt loam, yellowish brown (10YR 5/4) moist; moderate very coarse prismatic structure; hard, friable, slightly sticky and slightly plastic; few very fine roots on faces of peds; many very fine tubular pores and common very fine irregular pores; many fine and medium prominent redoximorphic concentrations that are strong brown (7.5YR 5/6) moist and are in interior of peds; many distinct very pale brown (10YR 7/3) uncoated skeletons coating clay films, lining pores, and on faces of peds; very strongly acid (pH 4.8); gradual wavy boundary.
- Btb1—34 to 49 inches; pale brown (10YR 6/3) silty clay loam, grayish brown (10YR 5/2) moist; weak very coarse prismatic structure; very hard, firm, moderately sticky and moderately plastic; few very fine roots on faces of peds; common very fine tubular pores and common very fine and fine and few medium irregular pores; many prominent redoximorphic concentrations that are strong brown (7.5YR 5/6) moist and are in interior of peds; many distinct brown (10YR 4/3) clay films lining pores and on faces of peds; 10 percent fine gravel; strongly acid (pH 5.2); abrupt wavy boundary.
- Btb2—49 to 64 inches; brown (7.5YR 4/4) clay loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine tubular and irregular pores; common fine prominent redoximorphic depletions that are gray (N 5/0) moist; common distinct light gray (5Y 6/1) clay films lining pores and on faces of peds; 10 percent distinct black (10YR 2/1) iron-manganese stains lining pores and on faces of peds; 10 percent fine gravel; strongly acid (pH 5.2).

### ***Range in Characteristics***

*Depth to seasonal high perched water table:* At the surface to a depth of 13 inches in November through May

*Flooding:* Frequent, very long periods in November through June

## ***Texascreek Series***

*Depth class:* Moderately deep to paralithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands

*Landform:* Canyons

*Parent material:* Loess over residuum derived from gneiss, granite, and/or schist

*Slope range:* 35 to 75 percent

*Elevation:* 1,000 to 3,100 feet

*Mean annual precipitation:* 24 to 35 inches

*Mean annual air temperature:* 40 to 52 degrees F

*Frost-free period:* 80 to 180 days

*Taxonomic class:* Coarse-loamy, mixed, superactive, mesic Ultic Haploxerolls

### ***Typical Pedon***

Texascreek loam in an area of Johnson-Texascreek complex, 35 to 75 percent slopes, about 1 mile south of Ahsahka, Idaho; about 2,560 feet north and 1,000 feet

## Soil Survey of Clearwater Area, Idaho

west of the southeast corner of section 4, T. 36 N., R. 1 E.; latitude 46 degrees, 29 minutes, 33 seconds north and longitude 116 degrees, 19 minutes, 42 seconds west; U.S. Geological Survey Orofino West Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A1—1 to 3 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, friable, slightly sticky and nonplastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; neutral (pH 6.6); clear smooth boundary.

A2—3 to 8 inches; dark grayish brown (10YR 4/2) loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; neutral (pH 6.6); clear wavy boundary.

BA—8 to 13 inches; dark brown (10YR 4/3) loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common medium and few coarse roots; many very fine and fine irregular pores and few very fine tubular pores; 5 percent gravel; neutral (pH 6.5); gradual wavy boundary.

Bw1—13 to 19 inches; dark yellowish brown (10YR 4/4) gravelly loam, dark yellowish brown (10YR 3/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine, common medium, and few coarse roots; many very fine and fine irregular pores and few very fine tubular pores; common faint clay films bridging sand grains and on surface of gravel; 25 percent gravel; neutral (pH 6.4); gradual smooth boundary.

Bw2—19 to 25 inches; dark yellowish brown (10YR 4/4) gravelly loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common medium roots; many very fine and fine irregular pores and few very fine tubular pores; common faint clay films bridging sand grains and on surface of gravel; 25 percent gravel; slightly acid (pH 6.2); gradual wavy boundary.

C—25 to 33 inches; yellowish brown (10YR 5/4) gravelly sandy loam, dark yellowish brown (10YR 3/4) moist; massive; hard, friable, nonsticky and nonplastics; few fine and medium roots; many very fine and fine irregular pores; common faint clay films bridging sand grains and on surface of gravel; 25 percent gravel; moderately acid (pH 6.0); gradual wavy boundary.

Cr—33 inches; highly weathered granitic schist; 40 percent hard bedrock with few thin clay films on surface of bedrock.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 14 inches

*Depth to weathered bedrock:* 20 to 40 inches

### ***Threebear Series***

*Depth class:* Moderately deep to a fragipan

*Drainage class:* Moderately well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Mountains, plateaus

*Landform:* Hillslopes, mountain slopes

*Parent material:* Volcanic ash over loess

*Slope range:* 5 to 25 percent

*Elevation:* 2,800 to 3,400 feet

*Mean annual precipitation:* 35 to 45 inches

## Soil Survey of Clearwater Area, Idaho

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Medial over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands

### ***Typical Pedon***

Threebear medial silt loam in an area of Norwidge-Threebear complex, 5 to 25 percent slopes; Latah County, Idaho; about 10 miles north of Ahsahka, Idaho; about 80 feet south and 110 feet west of the northeast corner of section 9, T. 38 N., R. 1 E.; latitude 46 degrees, 39 minutes, 21 seconds north and longitude 116 degrees, 19 minutes, 48 seconds west; U.S. Geological Survey Aldermand Ridge Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 3 inches; yellowish brown (10YR 5/4) medial silt loam, dark yellowish brown (10YR 3/4) moist; weak medium granular structure; soft, very friable, nonsticky and slightly plastic; common fine and very fine and few medium roots; few very fine tubular pores; slightly acid (pH 6.4); clear smooth boundary.

Bw1—3 to 10 inches; yellowish brown (10YR 5/4) medial silt loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and slightly plastic; common fine and very fine and few medium and coarse roots; few very fine tubular pores; slightly acid (pH 6.2); gradual smooth boundary.

Bw2—10 to 18 inches; light yellowish brown (10YR 6/4) medial silt loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure; soft, very friable, nonsticky and slightly plastic; common fine and very fine and few medium and coarse roots; few very fine tubular pores; moderately acid (pH 6.0); abrupt wavy boundary.

2E/B—18 to 26 inches; 90 percent very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist, and 10 percent light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; weak medium and coarse subangular blocky structure; soft and slightly hard, friable, slightly sticky and slightly plastic; few fine and very fine roots throughout and few medium roots between peds; many very fine tubular pores and few fine irregular pores; few faint patchy clay films on faces of peds; very strongly acid (pH 5.0); gradual wavy boundary.

2B/E—26 to 35 inches; 60 percent light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist, and 40 percent very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; moderate medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine and medium roots between peds; many very fine tubular pores and few fine irregular pores; common faint patchy clay films on faces of peds and in pores; very strongly acid (pH 4.8); clear wavy boundary.

2Btx/E—35 to 40 inches; 75 percent light yellowish brown (10YR 6/4) silt loam, yellowish brown (10YR 5/4) moist, and 25 percent very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; moderate coarse prismatic structure; very hard (B material) and soft (E material), very firm (B material) and friable (E material), slightly sticky and slightly plastic; few fine and very fine roots between peds; common very fine tubular pores; common faint and few distinct discontinuous clay films on faces of peds and in pores; very strongly acid (pH 5.0); gradual wavy boundary.

2Btx1—40 to 55 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/6) moist; strong very coarse prismatic structure; very hard, very firm and brittle, slightly sticky and moderately plastic; few fine and very fine roots along faces of peds; common very fine tubular pores; common distinct dark



## Soil Survey of Clearwater Area, Idaho

yellowish brown (10YR 4/6) clay films on faces of peds; E material is between prism faces and is 10 to 20 millimeters thick near upper boundary; few patchy prominent black manganese stains on faces of peds; very strongly acid (pH 5.0); clear wavy boundary.

2Btx2—55 to 69 inches; light yellowish brown (10YR 6/4) silty clay loam, dark yellowish brown (10YR 4/6) moist; moderate coarse and very coarse prismatic structure; very hard, firm and brittle, slightly sticky and moderately plastic; common very fine tubular pores; common distinct dark yellowish brown (10YR 4/6) clay films on faces of peds; few rounded medium soft masses of iron; very strongly acid (pH 4.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 23 inches

*Depth to seasonal high perched water table:* 4 to 36 inches in December through April

*Depth to the fragipan:* 23 to 40 inches

### ***Tomodo Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Mountains

*Landform:* Mountain slopes, structural benches

*Parent material:* Volcanic ash over loamy colluvium derived from metamorphic rock

*Slope range:* 15 to 40 percent

*Elevation:* 1,700 to 4,000 feet

*Mean annual precipitation:* 30 to 50 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy, amorphic over isotic, frigid Alfic Udivitrands

### ***Typical Pedon***

Tomodo ashy silt loam in an area of Tomodo-Lado complex, 15 to 35 percent slopes; Latah County, Idaho; about 5 miles north and 3 miles east of Cavendish, Idaho; about 1,700 feet south and 1,800 feet west of the northeast corner of section 18, T. 38 N., R. 1 E.; latitude 46 degrees, 38 minutes, 19 seconds north and longitude 116 degrees, 22 minutes, 41 seconds west; U.S. Geological Survey Park Quadrangle.

Oi—0 to 2 inches; slightly decomposed plant material.

A—2 to 3 inches; brown (10YR 5/3) ashy silt loam, dark yellowish brown (10YR 3/4) moist; weak coarse granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine irregular pores; neutral (pH 6.8); abrupt wavy boundary.

Bw1—3 to 11 inches; yellowish brown (10YR 5/4) ashy silt loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure parting to moderate coarse granular; soft, very friable, nonsticky and slightly plastic; common very fine and fine and few medium roots; common very fine irregular pores; neutral (pH 6.8); diffuse smooth boundary.

Bw2—11 to 20 inches; brownish yellow (10YR 6/6) ashy silt loam, dark yellowish brown (10YR 4/4) moist; weak coarse subangular blocky structure parting to moderate coarse granular; soft, very friable, nonsticky and slightly plastic; common



- very fine, fine, and medium roots; common very fine irregular pores; slightly acid (pH 6.2); abrupt wavy boundary.
- 2E—20 to 23 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots on faces of peds and few very fine roots throughout; common very fine tubular pores; 10 percent fine mica flakes; moderately acid (pH 6.0); clear wavy boundary.
- 2E/B—23 to 30 inches; E part is 85 percent very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist, and B part is 15 percent yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots along faces of peds and few very fine roots throughout; common very fine tubular pores; 10 percent fine mica flakes; moderately acid (pH 6.0); clear wavy boundary.
- 2B/E1—30 to 42 inches; B part is 60 percent yellowish brown (10YR 5/4) loam, dark yellowish brown (10YR 4/4) moist, and E part is 40 percent very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; weak very coarse prismatic structure parting to moderate coarse subangular blocky; extremely hard, firm, slightly sticky and moderately plastic; few very fine, fine, and medium roots along faces of peds; many very fine tubular pores; common faint clay films on faces of peds and common distinct clay films in pores; 10 percent fine mica flakes; strongly acid (pH 5.2); gradual wavy boundary.
- 2B/E2—42 to 51 inches; B part is 75 percent yellowish brown (10YR 5/4) clay loam, dark yellowish brown (10YR 4/4) moist, and E part is 25 percent very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; weak very coarse prismatic structure parting to moderate medium and coarse angular blocky; extremely hard, firm, moderately sticky and moderately plastic; few fine roots along faces of peds; many very fine tubular pores; common distinct clay films that are brown (7.5YR 4/4) moist and are in pores and on faces of peds; 25 percent of horizon is brittle when moist; 10 percent fine mica flakes; strongly acid (pH 5.2); gradual wavy boundary.
- 2Bt—51 to 62 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 3/4) moist; weak very coarse prismatic structure parting to moderate medium and coarse angular blocky; extremely hard, firm, moderately sticky and moderately plastic; few fine roots along faces of peds; many very fine tubular pores; many distinct clay films that are brown (7.5YR 4/4) moist and are in pores and on faces of peds; many prominent light gray (10YR 7/2) silt grains in pores and on faces of peds; 40 percent of horizon is brittle when moist; 10 percent fine mica flakes; strongly acid (pH 5.2); gradual smooth boundary.
- 2Btx—62 to 66 inches; light yellowish brown (10YR 6/4) clay loam, dark yellowish brown (10YR 3/4) moist; strong medium prismatic structure; extremely hard, very firm, moderately sticky and moderately plastic; few very fine roots along faces of peds; few very fine tubular pores; many prominent clay films that are brown (7.5YR 4/4) moist and are on faces of peds; 50 percent of horizon is brittle when moist; 5 percent fine mica flakes; strongly acid (pH 5.4).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 20 inches

*Depth to fragic characteristics:* 20 to 51 inches

## ***Township Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over colluvium derived from schist

*Slope range:* 15 to 75 percent

*Elevation:* 1,600 to 4,700 feet

*Mean annual precipitation:* 35 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 50 to 110 days

*Taxonomic class:* Ashy over loamy-skeletal, amorphous over paramicaceous, frigid  
Typic Udivitrands

### **Typical Pedon**

Township ashy silt loam (fig. 29) in an area of Rettig-Township complex, 35 to 60 percent slopes, about 7 miles southwest of Elk River, Idaho; about 250 feet north and 750 feet east of the southwest corner of section 30, T. 39 N., R. 2 E.; latitude 46 degrees, 41 minutes, 19 seconds north and longitude 116 degrees, 15 minutes, 52 seconds west; U.S. Geological Survey Aldermand Ridge Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

A—1 to 3 inches; dark yellowish brown (10YR 4/4) ashy silt loam, very dark brown (7.5YR 2.5/3) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and common fine roots throughout; many very fine and fine irregular pores; 1 percent fine mica flakes; 3 percent gravel, 5 percent cobbles, and 2 percent flagstones; strongly acid (pH 5.3); abrupt smooth boundary.

Bw1—3 to 11 inches; dark yellowish brown (10YR 4/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots throughout; many very fine irregular pores and common very fine and few fine tubular pores; 2 percent fine mica flakes; 3 percent gravel and 5 percent cobbles; slightly acid (pH 6.3); clear smooth boundary.

Bw2—11 to 17 inches; yellowish brown (10YR 5/6) ashy silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium roots throughout; many very fine irregular pores and common very fine and fine tubular pores; 2 percent fine mica flakes; 5 percent gravel; slightly acid (pH 6.5); abrupt wavy boundary.

2Bw3—17 to 35 inches; yellowish brown (10YR 5/4) very flaggy loam, dark brown (7.5YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine roots between peds; common very fine irregular and tubular pores; 25 percent fine mica flakes; 10 percent gravel, 10 percent cobbles, and 30 percent flagstones; slightly acid (pH 6.2); clear wavy boundary.

2Bw4—35 to 43 inches; light yellowish brown (10YR 6/4) very cobbly loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and slightly plastic; many very fine and fine roots between peds and few medium roots throughout; common very fine irregular pores and few very fine tubular pores; 40 percent fine mica flakes; 20 percent gravel, 20 percent cobbles, and 15 percent flagstones; slightly acid (pH 6.2); clear wavy boundary.

2BC—43 to 53 inches; light yellowish brown (10YR 6/4) extremely cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine



Figure 29.—Typical profile of a Township soil. The volcanic ash mantle is between depths of 1.5 and 16.5 inches (A and Bw horizons). The ochric epipedon is between depths of 1.5 and 3.0 inches (A horizon). The cambic horizon is between depths of 3 and 43 inches (Bw and 2Bw horizons). The particle-size control section is between depths of 3 and 43 inches (A, Bw, and 2Bw horizons).

and fine roots between peds and common medium and coarse roots throughout; common very fine irregular pores and few very fine tubular pores; 50 percent fine mica flakes; 15 percent gravel, 25 percent cobbles, and 25 percent flagstones; slightly acid (pH 6.2); clear wavy boundary.

2C—53 to 66 inches; light yellowish brown (10YR 6/4) extremely flaggy sandy loam, dark yellowish brown (10YR 3/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots throughout; common very fine irregular pores; 65 percent fine mica flakes; 20 percent gravel, 10 percent cobbles, and 35 percent flagstones; slightly acid (pH 6.1).

#### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 23 inches

## **Trappercreek Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Terraces

*Parent material:* Volcanic ash over mixed alluvium

*Slope range:* 5 to 15 percent

*Elevation:* 3,300 to 3,900 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

*Taxonomic class:* Medial over loamy, amorphic over mixed, active Typic Haplocryands

### **Typical Pedon**

Trappercreek medial silt loam in an area of Trappercreek-Narnett complex, 5 to 15 percent slopes, about 4 miles north of Pierce, Idaho; about 150 feet south and 1,700 feet east of the northwest corner of section 16, T. 37 N., R 5 E.; latitude 46 degrees, 33 minutes, 22 seconds north and longitude 115 degrees, 50 minutes, 14 seconds west; U.S. Geological Survey Jaype Quadrangle.

Oi—0 to 4 inches; slightly decomposed plant material.

A—4 to 8 inches; brown (7.5YR 5/4) medial silt loam, dark brown (7.5YR 3/3) moist; weak fine and medium granular structure; soft, very friable, nonsticky and nonplastic; many fine to coarse roots; many very fine irregular pores; 3 percent iron-manganese concretions; slightly acid (pH 6.5); clear smooth boundary.

Bw—8 to 19 inches; brownish yellow (10YR 6/6) medial silt loam, dark brown (7.5YR 3/4) moist; weak fine and medium subangular blocky structure parting to moderate very fine and fine granular; soft, very friable, nonsticky and nonplastic; many fine and medium and common coarse roots; many very fine irregular pores; 5 percent iron-manganese concretions; slightly acid (pH 6.5); abrupt wavy boundary.

2Bt1—19 to 32 inches; light yellowish brown (10YR 6/4) silt loam, brown (7.5YR 5/4) moist; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and moderately plastic; common fine and medium roots between peds and common very fine roots throughout; common very fine and fine irregular and tubular pores; common continuous distinct dark yellowish brown (10YR 4/4) clay films on faces of peds and in pores; common continuous distinct pink (7.5YR 7/3) skeletans on faces of peds; 3-inch-wide krotovina oriented vertically; 2 percent fine mica flakes; moderately acid (pH 6.0); clear smooth boundary.

2Bt2—32 to 46 inches; light yellowish brown (10YR 6/4) silt loam, brown (7.5YR 4/4) moist; moderate coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine and few medium roots between peds and few very fine roots throughout; common very fine and fine tubular pores; common continuous distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; few black iron-manganese stains on faces of peds; 5 percent fine mica flakes; moderately acid (pH 5.7); clear wavy boundary.

2Bt3—46 to 60 inches; reddish yellow (7.5YR 6/6) silty clay loam, strong brown (7.5YR 5/6) moist; strong coarse subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; few very fine and fine roots between peds and few very fine roots throughout; common very fine and fine tubular pores; many continuous distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; few black iron-manganese stains on faces of peds; 3 percent fine mica flakes; moderately acid (pH 5.7); gradual wavy boundary.



2Bt4—60 to 79 inches; reddish yellow (7.5YR 6/6) silty clay loam, brown (7.5YR 4/4) moist; strong very coarse subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; few very fine roots between peds; few very fine tubular pores; many continuous prominent brown (7.5YR 4/4) clay films on faces of peds and in pores; 2 percent fine mica flakes in horizontal bands; strongly acid (pH 5.5); gradual smooth boundary.

2Bt5—79 to 85 inches; brown (7.5YR 5/4) silt loam, brown (7.5YR 4/4) moist; moderate coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots between peds; few very fine tubular pores; many continuous distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; 10 percent fine mica flakes; strongly acid (pH 5.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 15 to 23 inches

## ***Uvi Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands, mountains

*Landform:* Canyons, mountain slopes

*Parent material:* Loess over colluvium derived from granite, basalt, and/or metamorphic rock

*Slope range:* 35 to 75 percent

*Elevation:* 1,400 to 4,000 feet

*Mean annual precipitation:* 26 to 30 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine-loamy, isotic, frigid Vitrandic Haploxerepts

### ***Typical Pedon***

Uvi ashy loam, 35 to 75 percent slopes, about 0.5 mile north and 0.5 mile west of Grangemont, Idaho; about 800 feet south and 2,000 feet east of the northwest corner of section 26, T. 38 N., R. 3 E.; latitude 46 degrees, 36 minutes, 47 seconds north and longitude 116 degrees, 2 minutes, 36 seconds west; U.S. Geological Survey Grangemont Quadrangle.

Oe—0 to 1 inch; moderately decomposed plant material.

A1—1 to 3 inches; dark grayish brown (10YR 4/2) ashy loam, very dark brown (7.5YR 2.5/2) moist; weak fine and very fine granular structure; soft, firm, nonsticky and slightly plastic; many fine and very fine roots throughout; many fine and very fine irregular pores and common very fine and fine tubular pores; 5 percent fine mica flakes; slightly acid (pH 6.1); abrupt wavy boundary.

A2—3 to 5 inches; brown (10YR 5/3) ashy loam, dark brown (7.5YR 3/2) moist; weak fine and medium granular structure parting to weak medium subangular blocky; slightly hard, friable, nonsticky and moderately plastic; many fine and very fine roots throughout; many fine and very fine irregular pores and common very fine and fine tubular pores; 5 percent fine mica flakes; slightly acid (pH 6.1); abrupt wavy boundary.

ABt—5 to 8 inches; brown (10YR 5/3) ashy loam, dark brown (7.5YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; many distinct clay films on faces of peds and in pores; many fine and very fine roots along faces of peds and few medium

- and coarse roots throughout; many fine and very fine irregular pores and common fine and very fine and few medium and coarse tubular pores; 10 percent fine mica flakes; moderately acid (pH 6.0); clear wavy boundary.
- Bt1—8 to 15 inches; brown (10YR 5/3) loam, brown (7.5YR 4/3) moist; strong medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; many distinct clay films on faces of peds and in pores; common fine and medium roots along faces of peds; common very fine and fine irregular pores and common very fine and fine and few medium tubular pores; 15 percent fine mica flakes; neutral (pH 6.6); clear wavy boundary.
- Bt2—15 to 25 inches; very pale brown (10YR 7/4) and light brown (7.5YR 6/4) loam, dark yellowish brown (10YR 4/4 and 7.5YR 4/4) moist; strong fine, medium, and coarse subangular blocky structure; slightly hard, friable, slightly sticky and moderately plastic; common distinct clay films in root channels and pores and many distinct clay films on faces of peds and in pores; common very fine and fine roots along faces of peds and few coarse roots throughout; common fine and very fine irregular and tubular pores; 25 percent fine mica flakes; 2 percent gravel; slightly acid (pH 6.1); clear wavy boundary.
- Bt/C1—25 to 32 inches; very pale brown (10YR 7/4) loam, yellowish brown (10YR 5/4) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common distinct clay films on faces of peds and in pores; common fine and very fine roots along faces of peds; common very fine and fine irregular and tubular pores; 25 percent fine mica flakes; 5 percent gravel; moderately acid (pH 6.0); clear wavy boundary.
- Bt/C2—32 to 44 inches; light yellowish brown (10YR 6/4) loam, yellowish brown (10YR 5/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few distinct clay films in root channels and pores; common fine and very fine roots along faces of peds; few very fine and fine tubular pores; 30 percent fine mica flakes; 10 percent paragravel and 5 percent gravel; moderately acid (pH 5.9); clear wavy boundary.
- C—44 to 61 inches; yellowish brown (10YR 5/4) paragravelly sandy loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, nonsticky and nonplastic; common fine and very fine roots throughout; few very fine and fine tubular pores; 70 percent fine mica flakes; 25 percent paragravel; moderately acid (pH 5.9).

## **Vaywood Series**

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, ridges

*Parent material:* Volcanic ash over mixed colluvium

*Slope range:* 15 to 75 percent

*Elevation:* 4,400 to 5,600 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 38 to 41 degrees F

*Frost-free period:* 30 to 100 days

*Taxonomic class:* Medial over loamy-skeletal, amorphic over isotic Typic Haplocryands

### **Typical Pedon**

Vaywood medial silt loam, 35 to 75 percent slopes ([fig. 30](#)), about 6 miles northeast of Elk River, Idaho; about 1,900 feet north and 50 feet west of the southeast corner of section 30, T. 41 N., R.3 E.; latitude 46 degrees, 52 minutes, 6 seconds north and



## Soil Survey of Clearwater Area, Idaho

longitude 116 degrees, 7 minutes, 20 seconds west; U.S. Geological Survey Elk Butte Quadrangle.

Oi—0 to 1 inch; slightly decomposed plant material.

Oe—1 to 2 inches; moderately decomposed plant material.

A—2 to 7 inches; dark brown (10YR 3/3) medial silt loam, black (10YR 2/1) moist; weak very fine to medium subangular blocky structure parting to moderate medium granular; soft, very friable, nonsticky and nonplastic; many very fine and few fine roots; many very fine and common fine and medium irregular pores; 1 percent gravel; strongly acid (pH 5.3); clear wavy boundary.

Bw1—7 to 15 inches; dark yellowish brown (10YR 4/4) medial silt loam, very dark brown (7.5YR 2.5/3) moist; weak fine and medium subangular blocky structure

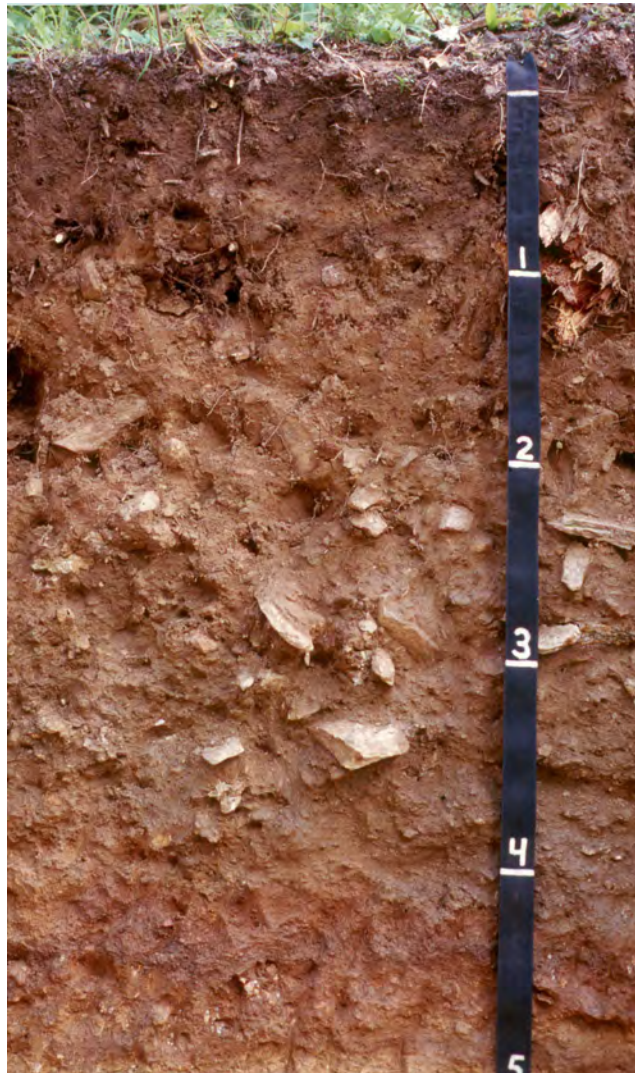


Figure 30.—Typical profile of a Vaywood soil. The volcanic ash mantle is between depths of 1.75 and 22.00 inches (A and Bw1 horizons). The ochric epipedon is between depths of 1.75 and 7.00 inches (A horizon). The cambic horizon is between depths of 7 and 34 inches (Bw1 and 2Bw2 horizons). The particle-size control section is between depths of 1.75 and 42.00 inches (A, Bw1, and 2Bw2 horizons and part of 2BC horizon).

## Soil Survey of Clearwater Area, Idaho

parting to moderate medium granular; soft, very friable, nonsticky and nonplastic; many very fine, common fine, and few medium roots; many very fine and few fine and medium irregular pores; 5 percent gravel; strongly acid (pH 5.2); clear wavy boundary.

- Bw2—15 to 20 inches; yellowish brown (10YR 5/4) medial silt loam, dark brown (7.5YR 3/4) moist; weak fine to coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; many very fine and few fine to coarse roots; many very fine and few fine and medium irregular pores and few very fine tubular pores; 5 percent gravel; moderately acid (pH 5.6); abrupt wavy boundary.
- 2Bw3—20 to 25 inches; light yellowish brown (10YR 6/4) very cobbly loam, dark brown (7.5YR 3/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and nonplastic; many very fine and few fine to coarse roots; common very fine irregular pores and few very fine tubular pores; 1 percent fine mica flakes; 15 percent gravel and 20 percent cobbles; strongly acid (pH 5.4); abrupt wavy boundary.
- 2Bw4—25 to 38 inches; very pale brown (10YR 7/4) very cobbly sandy loam, dark yellowish brown (10YR 3/4) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and few fine roots; common very fine irregular pores and few very fine tubular pores; 2 percent fine mica flakes; 30 percent gravel and 25 percent cobbles; strongly acid (pH 5.5); clear wavy boundary.
- 2BC—38 to 47 inches; very pale brown (10YR 7/3) gravelly sandy loam, yellowish brown (10YR 5/4) moist; weak coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; common very fine and few fine roots; common very fine tubular pores; 2 percent fine mica flakes; 15 percent gravel and 10 percent cobbles; very strongly acid (pH 4.7); clear wavy boundary.
- 2C—47 to 62 inches; very pale brown (10YR 7/4) gravelly sandy loam, yellowish brown (10YR 5/6) moist; massive; few very fine roots; common very fine tubular pores; 2 percent fine mica flakes; 15 percent gravel and 5 percent cobbles; very strongly acid (pH 4.8).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 17 to 21 inches

### ***Weitas Series***

*Depth class:* Very deep

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Mountains

*Landform:* Mountain slopes, slumps

*Parent material:* Volcanic ash over loamy colluvium derived from granite and/or metamorphic rock

*Slope range:* 5 to 40 percent

*Elevation:* 4,000 to 5,300 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 38 to 44 degrees F

*Frost-free period:* 30 to 110 days

*Taxonomic class:* Medial over loamy, glassy over isotic Vitric Fulvicryands

### ***Typical Pedon***

Weitas medial loam in an area of Fico-Weitas complex, 20 to 40 percent slopes, about 4 miles northeast of Pierce, Idaho; about 1,600 feet south and 1,900 feet west of

## Soil Survey of Clearwater Area, Idaho

the northeast corner of section 28, T. 37 N., R. 6 E.; latitude 46 degrees, 31 minutes, 25 seconds north and longitude 115 degrees, 42 minutes, 17 seconds west; U.S. Geological Survey French Mountain Quadrangle.

- A1—0 to 6 inches; dark grayish brown (10YR 4/2) medial loam, very dark gray (10YR 3/1) moist; weak very fine and fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; 3 percent fine mica flakes; 5 percent fine gravel; moderately acid (pH 5.8); clear smooth boundary.
- A2—6 to 14 inches; brown (10YR 4/3) medial loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to fine and very fine granular; soft, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; many very fine and fine irregular pores; 3 percent fine mica flakes; 5 percent gravel; moderately acid (pH 5.8); clear smooth boundary.
- Bw1—14 to 22 inches; brown (10YR 5/3) medial loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many very fine, fine, and medium roots; common very fine and fine tubular pores; 3 percent fine mica flakes; 10 percent gravel; moderately acid (pH 5.8); clear smooth boundary.
- 2Bw2—22 to 37 inches; pale brown (10YR 6/3) gravelly loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, nonsticky and nonplastic; many very fine, fine, medium, and coarse roots; common very fine and fine tubular pores; 20 percent gravel and 10 percent cobbles; moderately acid (pH 5.8); abrupt smooth boundary.
- 2C1—37 to 43 inches; very pale brown (10YR 7/3) gravelly loamy sand, yellowish brown (10YR 5/4) moist; single grain; loose, very friable, nonsticky and nonplastic; few fine and medium roots; 20 percent gravel and 5 percent cobbles; moderately acid (pH 5.8); abrupt smooth boundary.
- 3C2—43 to 60 inches; very pale brown (10YR 7/3) very gravelly loam, dark brown (10YR 3/3) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine, fine, and medium roots; common very fine and fine tubular pores; 30 percent gravel and 15 percent cobbles; strongly acid (pH 5.5).

### ***Range in Characteristics***

*Thickness of volcanic ash mantle:* 14 to 25 inches

## ***Wellsbench Series***

*Depth class:* Deep to lithic bedrock

*Drainage class:* Well drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately low

*Landscape:* Canyonlands

*Landform:* Canyons, structural benches

*Parent material:* Loess and/or colluvium derived from basalt

*Slope range:* 2 to 55 percent

*Elevation:* 1,000 to 3,000 feet

*Mean annual precipitation:* 23 to 26 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Clayey-skeletal, smectitic, mesic Pachic Ultic Argixerolls

### ***Typical Pedon***

Wellsbench silt loam in an area of Wellsbench-Lacy complex, 25 to 55 percent slopes, about 0.75 mile north of Orofino, Idaho; about 1,750 feet south and 1,900 feet

## Soil Survey of Clearwater Area, Idaho

east of the northwest corner of section 5, T. 36 N., R. 2 E.; latitude 46 degrees, 29 minutes, 42 seconds north and longitude 116 degrees, 14 minutes, 4 seconds west; U.S. Geological Survey Orofino East Quadrangle.

- A—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; many very fine tubular pores; 10 percent gravel; neutral (pH 7.2); clear smooth boundary.
- Bt1—6 to 14 inches; dark grayish brown (10YR 4/2) gravelly silty clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine and fine and common medium roots; many very fine and fine and common medium and coarse tubular pores; common faint clay films on faces of peds and in pores; 20 percent gravel and 8 percent cobbles; neutral (pH 7.0); clear wavy boundary.
- Bt2—14 to 30 inches; brown (10YR 4/3) very cobbly silty clay loam, dark brown (10YR 3/3) moist; moderate fine prismatic structure; hard, firm, very sticky and very plastic; common very fine, fine, and medium roots; many very fine and fine tubular pores; continuous prominent clay films on faces of peds and in pores; 10 percent gravel and 30 percent cobbles; moderately acid (pH 6.0); abrupt wavy boundary.
- Bt3—30 to 41 inches; dark yellowish brown (10YR 4/4) very gravelly silty clay, dark brown (10YR 3/3) moist; moderate fine prismatic structure parting to moderate fine and medium subangular blocky; very hard, very firm, very sticky and very plastic; common fine and medium roots; many very fine and fine tubular pores and common very fine irregular pores; continuous prominent clay films on faces of peds and lining pores; 30 percent gravel and 10 percent cobbles; moderately acid (pH 6.0); clear wavy boundary.
- R—41 inches; unweathered basalt.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 22 to 41 inches

*Depth to basalt:* 40 to 60 inches

### ***Whiskeycreek Series***

*Depth class:* Shallow to lithic bedrock

*Drainage class:* Somewhat excessively drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Moderately high

*Landscape:* Canyonlands

*Landform:* Canyons

*Parent material:* Colluvium derived from granite and/or gneiss

*Slope range:* 35 to 75 percent

*Elevation:* 1,000 to 3,100 feet

*Mean annual precipitation:* 24 to 35 inches

*Mean annual air temperature:* 45 to 52 degrees F

*Frost-free period:* 90 to 180 days

*Taxonomic class:* Sandy, mixed, mesic Lithic Ultic Haploxerolls

### ***Typical Pedon***

Whiskeycreek coarse sandy loam in an area of Fordcreek loam, 40 to 75 percent slopes, about 0.5 mile southeast of Ahsahka, Idaho; about 600 feet north and 1,800 feet west of the southeast corner of section 34, T. 37 N., R. 1 E.; latitude



## Soil Survey of Clearwater Area, Idaho

46 degrees, 30 minutes, 10 seconds north and longitude 116 degrees, 18 minutes, 45 seconds west; U.S. Geological Survey Ahsahka Quadrangle.

A—0 to 4 inches; dark grayish brown (10YR 4/2) coarse sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, very friable, nonsticky and nonplastic; common very fine roots; many very fine irregular pores; 5 percent gravel; slightly acid (pH 6.2); clear smooth boundary.

Bw—4 to 9 inches; brown (10YR 5/3) coarse sandy loam, dark brown (10YR 3/3) moist, weak fine subangular blocky structure parting to weak fine granular; slightly hard, friable, nonsticky and nonplastic; common very fine and fine roots; common very fine irregular pores; 10 percent gravel; moderately acid (pH 6.0); clear smooth boundary.

C—9 to 15 inches; pale brown (10YR 6/3) gravelly loamy coarse sand, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; many very fine and common fine roots; many very fine irregular pores; 15 percent gravel; moderately acid (pH 6.0); abrupt wavy boundary.

R—15 inches; granite.

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 7 to 14 inches

*Depth to bedrock:* 9 to 20 inches

### ***Wilkins Series***

*Depth class:* Very deep

*Drainage class:* Somewhat poorly drained

*Capacity of the most limiting soil layer to transmit water (Ksat):* Very low

*Landscape:* Canyonlands, plateaus

*Landform:* Structural benches, swales

*Parent material:* Mixed alluvium and/or loess

*Slope range:* 0 to 5 percent

*Elevation:* 1,900 to 3,200 feet

*Mean annual precipitation:* 23 to 35 inches

*Mean annual air temperature:* 40 to 45 degrees F

*Frost-free period:* 80 to 125 days

*Taxonomic class:* Fine, smectitic, frigid Xerertic Argialbolls

### ***Typical Pedon***

Wilkins silt loam, 0 to 5 percent slopes; Lewis County, Idaho; about 2 miles north of Winchester, Idaho; about 1,840 feet north and 700 feet east of the southwest corner of section 19, T. 34 N., R. 2 W.; latitude 46 degrees, 16 minutes, 22 seconds north and longitude 116 degrees, 38 minutes, 15 seconds west; U.S. Geological Survey Reubens Quadrangle.

A1—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, black (10YR 2/1) moist; few faint redoximorphic concentrations that are dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure parting to moderate medium granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; common very fine irregular and tubular pores; moderately acid (pH 6.0); gradual smooth boundary.

A2—6 to 15 inches; dark grayish brown (10YR 4/2) silt loam, black (10YR 2/1) moist; few faint redoximorphic concentrations that are dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure parting to weak medium

- granular; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; many very fine tubular pores; moderately acid (pH 6.0); abrupt irregular boundary.
- E—15 to 20 inches; grayish brown (10YR 5/2) silt loam, dark grayish brown (10YR 4/2) moist; few faint redoximorphic concentrations that are very pale brown (10YR 7/4) moist; weak medium subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few fine roots; few very fine tubular pores; many prominent contiguous skeletalans on faces of peds; few fine rounded iron-manganese concretions; moderately acid (pH 6.0); abrupt wavy boundary.
- 2Bt—20 to 26 inches; pale brown (10YR 6/3) and grayish brown (10YR 5/2) silty clay, dark grayish brown (10YR 4/2) and very dark grayish brown (10YR 3/2) moist; few faint redoximorphic concentrations that are light yellowish brown (10YR 6/4) moist; moderate medium prismatic structure; very hard, firm, very sticky and very plastic; few fine roots; many very fine and fine tubular pores; few distinct discontinuous clay films on faces of peds and in pores; few prominent patchy skeletalans on prism faces near upper boundary; few fine rounded iron-manganese concretions; slightly acid (pH 6.4); gradual wavy boundary.
- 2Bt1—26 to 40 inches; light gray (2.5Y 7/2) silty clay, dark grayish brown (2.5Y 4/2) moist; many fine faint redoximorphic concentrations that are olive brown (2.5Y 4/4) moist; weak medium and coarse angular blocky structure; very hard, firm, very sticky and very plastic; few very fine roots; many very fine and fine tubular pores; few faint discontinuous clay films on faces of peds; few fine rounded iron-manganese concretions; neutral (pH 6.8); gradual wavy boundary.
- 2Bt2—40 to 52 inches; light brownish gray (2.5Y 6/2) silty clay, very dark grayish brown (2.5Y 3/2) moist; common medium prominent redoximorphic concentrations that are yellowish brown (10YR 5/6) moist and common medium and fine prominent redoximorphic concentrations that are gray (5Y 5/1) moist; weak medium and coarse angular blocky structure; slightly hard, firm, very sticky and very plastic; few very fine tubular pores; few fine rounded iron-manganese concretions; neutral (pH 6.8); clear wavy boundary.
- 3BC—52 to 64 inches; light olive gray (5Y 6/2) clay loam, olive (5Y 5/3) moist; many medium prominent redoximorphic concentrations that are yellowish brown (10YR 5/6) moist and common fine prominent redoximorphic depletions that are gray (5Y 5/1) moist; massive; slightly hard, firm, moderately sticky and moderately plastic; neutral (pH 6.8).

### ***Range in Characteristics***

*Thickness of mollic epipedon:* 10 to 19 inches

*Depth to seasonal high perched water table:* At the surface to a depth of 30 inches in October through July

*Flooding:* Occasional, brief periods in December through February



# Formation of the Soils

---

Soil is a natural body that covers the surface of the earth and in which plants grow. It is a fundamental part of any terrestrial ecosystem and exists in dynamic balance with the other components of the environment.

Soils are characterized by the vertical sequence of layers, or horizons, that vary in color, texture, chemistry, and structure. Horizons are continually forming, usually over long periods of time, in response to environmental forces. These forces, referred to as soil-forming factors, are parent material, climate, biological activity, relief, and time. The combination of these five factors results in soil formation, although one or two forces may be dominant in any given area. Particular combinations of the soil-forming factors produce unique soil profiles.

## Soil-forming Factors

General information about the influence of the five soil-forming factors on soil formation in this survey area is given in this section.

### Parent Material

The soils in the survey area formed in a variety of surficial deposits. These include loess, alluvium, volcanic ash, colluvium, and residuum. This material may be deposited singly or, more commonly, in mixtures. The physical geology of the area has determined the distribution and composition of the different kinds of parent material.

Areas underlain by the Columbia River Basalt Group have been deeply dissected by the stream systems in the region. This has formed an elevated plateau cut by steep-walled canyons with narrow floors. In some areas, downcutting has been sufficient to expose the pre-Miocene granite and gneiss basement rock. The canyon floors are composed of alluvial deposits, including small remnants of Missoula Flood deposits along the Clearwater River. Colluvial deposits are along the foot of the canyon walls. Soils on the canyon walls formed in a mantle of colluvium of variable thickness over residuum derived from basalt or pre-Miocene granite and gneiss. Loess has been mixed into the upper part of this material, and a thin mantle of loess overlies this material in the more gently sloping areas (Othberg and others, 2002). Structural benches in the canyons are covered with a mantle of recent loess that overlies older material. This older material commonly is composed of earlier deposits of loess or a mixture of earlier deposits of loess and weathered basalt. Colluvial or landslide deposits are also common on the benches. These deposits include debris slide material composed of gravelly rubble in a clay-rich matrix as well as blocks of basalt, sedimentary interbeds, and pre-Miocene rocks that have rotated and moved laterally. The plateau surface has a mantle of Quaternary loess over Tertiary residuum derived from clayey saprolite. The basalt residuum is laterally discontinuous, and fresh basalt is at or near the surface in areas near drainageways and canyon rims. In other areas, the clayey saprolite is as much as 20 feet thick. The weathering of the basalt can be attributed to the increase in precipitation eastward and the age of the basalt surface, which is of the Miocene (Othberg and others, 2002). The loess deposits are

of variable thickness and have been deposited in episodes with intervening periods of soil formation. Observed thickness of the loess or reworked loess material ranges from 1 to 20 feet or more. The survey area is at the margin of the Palouse region; thus, it is more distal to the loess source. This has resulted in thinner individual depositions so that episodes of soil formation have been overprinted onto one another. As a result, a continuous series of superposed or "welded" paleosols is common (O'Geen and others, 2002; Busacca, 1989). The combination of basalt saprolite in areas of thin loess and paleosols in areas of thick loess has resulted in the presence of a clay-rich argillic horizon or fragipan underlying the most recent loess deposit on most of the plateau. Many of these layers restrict the downward movement of water and result in a seasonally saturated zone or a perched water table in the soils on the plateau. Along the eastern margin of the plateau, the basalt flows have formed embayments on the mountain front. Damming of local streams in these areas resulted in the deposition of isolated pockets of fluvial and lacustrine sediment on the basalt surface (Lewis, 2003; Camp and others, 1982).

Soils in the mountain region of the survey area formed in colluvium and residuum derived from a variety of metamorphic and granitic rocks. This material consists of gravel in a matrix of loamy to coarse sandy material. During the Pleistocene, only minor alpine glaciation took place (Lewis, 2003). As a result, most of the slopes have a relatively thick mantle of colluvium over highly weathered rock. Rock fragments are abundant in areas where the rock is more resistant to weathering and at the higher elevations. Pockets of sediment that is alluvial or of other uncertain origin are on some broad saddles, structural benches, and summits of low ridges. A thin mantle of loess is on some slopes near the plateau.

A mantle of mixed volcanic ash and loess is a prominent feature on the mountain slopes and on the eastern part of the plateau. The influence of volcanic ash can be detected in the soils that support Douglas-fir. The content of volcanic glass in these soils is about 5 percent. The influence becomes more pronounced moving eastward into areas that receive a higher amount of precipitation and have denser forests. In these areas, the content of volcanic glass is about 30 percent in the upper 1 to 2 feet of the soil profile. Most of the tephra was deposited during the eruption of Mount Mazama about 6,850 years before present (BP). This eruption produced about 122 cubic kilometers of airfall material, the most voluminous of the Holocene to historic eruptions in the Cascade Range. This tephra was strongly reworked by wind, bioturbation, and water during a mid-Holocene extended period of drought (Busacca and others, 2001). Entrainment by wind probably removed ash from the drier, grass-dominated areas while forest vegetation in other areas helped to capture the eolian material and protect it from further erosion.

## **Climate**

Climate has a strong influence on soil formation in the survey area. It affects the weathering of minerals, the activity of micro-organisms, and the movement of water through the soil. Climate also influences the kind and amount of vegetation, which in turn affects soil development.

Soil properties exhibit the influence of the present climate and of the different climates throughout the Quaternary. Some soils, such as those of the Jaype and Revling series, formed in old alluvial deposits associated with the emplacement of the Columbia River Basalt and exhibit the effects of the climatic conditions since the Miocene. Many of the soils on the basalt plateau have been strongly influenced by past climatic conditions. The climate in the survey area is thought to have been warmer and drier during the early to middle Holocene. During this period, the forestland/grassland ecotone would have been shifted eastward and toward the higher elevations.

The present climate of the survey area is characterized by warm, dry summers and cool, moist winters. The dry season is most pronounced at the lower elevations near Orofino. As the elevation increases, the temperatures are cooler and the precipitation is higher. The dry season is less pronounced in these areas. Most of the soils below an elevation of 3,000 feet have a xeric moisture regime; they generally receive less than 28 inches of precipitation per year. Most of the soils above an elevation of 3,000 feet have a udic moisture regime; they receive 28 to 60 inches of precipitation per year, depending on elevation. Many of the flood plain soils are saturated for significant periods of time and have an aquic moisture regime. Soil temperature regimes range from mesic to cryic. The mesic, or warm, temperature regime is in the lower canyon of the Clearwater River and extends up the canyon and in canyons of the tributaries of the river, primarily on the valley floors and south-facing canyon walls. The cooler frigid temperature regime is on the plateau and low mountains below an elevation of about 4,800 feet. This temperature regime also extends into the canyons on some north-facing slopes. The cryic, or coldest, temperature regime is on high mountains above an elevation of about 4,800 feet and in some mountain basins or drainageways where the downslope flow of cold air is restricted, creating cold pockets. In addition to these broad climatic zones, the complex pattern of microclimates has a strong influence on the soils and plant communities in a given area.

Perhaps the greatest effect of climate in the survey area is the production and movement of clay and dissolved components within the soil profile as a result of the moisture received. Many of the more gently sloping soils in the xeric areas of the canyons and plateau have a clay-enriched argillic horizon. In the udic zone, soils that formed in the Tertiary alluvial deposits exhibit advanced weathering of the clay and formation of iron-cemented material in the profile. Soils that have a layer that restricts internal drainage, such as a fragipan, exhibit evidence of iron reduction and subsequent removal or relocation of this element. Climate also probably plays a role in the production and degradation of fragipans.

### Vegetation

The vegetation of the past few thousand years has influenced soil formation, particularly the properties of the surface layer. In this survey area, the greatest effect vegetation has had on the soils is the content of organic matter in the A horizon. The vegetation on a particular soil is influenced by factors such as temperature, precipitation, and slope shape and aspect.

The native vegetation of the driest soils is bunchgrass prairie. This vegetation type consists dominantly of species such as bluebunch wheatgrass and Idaho fescue. It is on steep, south-facing canyon walls. The effective annual precipitation in these areas is 16 to 25 inches. The decomposition of the deep, extensive root systems associated with grassland plants adds much organic matter to upper part of the soils, producing a dark-colored layer known as a mollic epipedon. The mollic epipedon of the grassland soils, such as those of the Gwin and Kettenbach series, has an organic matter content of 2 to 4 percent and is 10 to 30 inches thick. As moisture increases slightly, open forest vegetation types that consist mainly of ponderosa pine or Douglas-fir become dominant. These dry forests have a layer of abundant grasses and forbs. They are on canyon slopes and benches and the drier parts of the plateau. They have an effective annual precipitation of about 18 to 28 inches. The mollic epipedon of these soils, such as those of the Driscoll, Jacket, and Keuterville series, has an organic matter content of 3 to 6 percent and is 10 to 35 inches thick. As moisture increases further, the forest canopy closes and the understory is dominantly shrubs or scattered, nongrassy forbs. These conditions are on the moist parts of the plateau and in the mountains. The effective annual precipitation in these areas is 28 to 60 inches. As moist forest species such as grand fir and western redcedar become dominant, organic matter is not readily

mixed into the upper part of the soil. Instead, duff layers, or O horizons, form as litter falls on the surface of the mineral soil. Mollic epipedons do not form in these areas. Soils such as those of the Grangemont, Riswold, and Jacot series have a 1- to 2-inch-thick layer under the O horizon that is 2 to 4 percent organic matter and commonly is hard to distinguish from the underlying subsoil. Within the moist forest zone, however, organic matter can accumulate in areas where decomposition is slow enough to allow for gradual mixing of decomposed organic material into the upper part of the soil. This slow rate of decomposition is associated with cold temperatures or poor drainage. Soils such as those of the Vaywood, Trappercreek, and Weitas series have an organic matter content of 3 to 10 percent in a dark-colored surface layer, which can be 3 to 40 inches thick. The Grice series is an example of soils that are cold and poorly drained and have a surface layer of peat.

## Relief

Relief of the land surface affects soil development by influencing soil drainage, erosion, and microclimates.

Soils in low-lying areas commonly have features that are associated with poor soil drainage. These features include a high content of organic matter in the surface layer, gleyed and mottled colors, and redoximorphic features. Examples of soils that have these features are Aquandic Endoaquepts and the Teneb series.

Soils on steep canyonsides and mountainsides are strongly influenced by slope gradient and aspect. Geologic erosion is relatively rapid on the steep slopes; thus, the soils tend to have weakly expressed horizons. Soils on steep slopes are also well drained. Soils on south- and west-facing slopes receive more direct sunlight and therefore are warmer and drier. Conversely, soils on north- and east-facing slopes are cooler and more moist. The convexity or concavity of the slope also influences water movement within the soil and affects soil development. Water tends to concentrate in concave areas in draws and on footslopes. Water tends to shed away from areas on convex knobs and nose slopes; thus, soils in these areas are drier. Windblown material, such as loess and volcanic ash, tends to accumulate on north- and east-facing slopes and in concave areas.

Soils in less sloping areas, such as benches and the plateau, are not as strongly affected by relief. However, they still exhibit differences in microclimate based on slope gradient and aspect as well as differences in erosion and deposition of material based on slope gradient and shape. For example, soils on the north- and east-facing slopes of the plateau receive more moisture as a result of drifting snow.

## Time

The effects of the soil-forming factors are tempered or accentuated by the length of time they have been acting on the soil. Time, or more specifically, geologic time, is a significant soil-forming factor.

Young soils on recent geomorphic surfaces have been subject to soil formation for only a short period of time; therefore, they have weakly expressed horizons. Examples are Aquandic Endoaquepts and Crumarine soils, which formed in Holocene flood plain deposits. Other soils formed in older parent material but exhibit characteristics of younger soils because they are on actively eroding slopes of steep canyonsides and mountainsides. Examples include Whiskeycreek, Cobbler, and Dullaxe soils.

Soils on older geomorphic surfaces develop features such as an argillic horizon or a fragipan that are characteristic of more advanced profile development. The longer the period of soil formation, the more pronounced these horizons become.

In this survey area, the oldest soils and those that have the most pronounced profiles are on the plateau. At the eastern margin of the plateau, emplacement of the basalt led to damming of local streams in areas where they exited the mountains.

In some relatively isolated areas, small embayments formed that trapped stream sediment. This Tertiary sediment has iron-cemented layers and argillic horizons that are high in content of kaolinite clay. These deposits later were covered with a thin mantle of loess and volcanic ash. The Jaype, Konkol, and Revling soils are examples. The remainder of the plateau has a mantle of loess, the deeper layers of which have been subject to some degree of reworking by stream action. The mantle is composed of late Pleistocene loess and/or Holocene volcanic ash. The subsoil consists of reworked loess that has accumulated since the early to middle Pleistocene. The abrupt and fine textured argillic horizons and fragipans in some soils are considered to be relict layers that formed during a previous episode of soil formation. The Kooskia, Kauder, and Threebear soils are examples. Isolated areas of older soils that have a strongly expressed argillic horizon are also in the mountains. They formed in deposits of uncertain age on stable geomorphic surfaces. They appear to be old alluvial deposits, although they are now in saddles and on benches high above the current drainageways. The soils that formed in these deposits have a thick mantle of mixed Holocene volcanic ash and loess. The Elkberry, Trappercreek, Odonnell, and Hobo soils are examples.

## **Soil Formation on Major Landforms**

This section explains in greater detail the formation and taxonomic features of representative soils. The interaction of the soil-forming factors is illustrated by a description of the sequences of soil development on major landforms.

### **Canyons**

The major rivers and tributaries within the survey area have all incised deep canyons within the Columbia River Basalt. In some areas, downcutting has exposed the underlying metamorphic basement rock. Within the canyons are at least three different geomorphic surfaces that represent unique soil-forming environments.

#### **Flood Plains and Terraces**

Narrow flood plain deposits are along the canyon floors. These are young geomorphic surfaces with soils that exhibit very weak development. Oxyaquic Xerofluvents are the youngest soils in these areas. They formed in relatively unaltered parent material; they have only an ochric epipedon and no development in the subsoil. Soils of the Itzee series (Ultic Cumulic Haploxerolls) formed on terraces in older parent material, probably from the early Holocene. These soils have a thick mollic epipedon and a weak cambic horizon in the subsoil.

Backwater deposits from the Missoula Floods have formed a terrace above the Holocene terrace. In most places, this deposit mantled the pre-existing landforms; thus, it is not a typical flat, well-defined terrace. This deposit originated downstream from the survey area, and it consists of material unrelated to an upstream erosional surface.

Missoula Floods sediment that is mixed with a small amount of loess is the parent material of the Newlig series (Pachic Ultic Argixerolls) ([fig. 31](#)). The Newlig soils have a thick mollic epipedon. Precipitation has been sufficient to leach some bases from the profile and to promote the development of an argillic horizon in the subsoil.

#### **Structural Benches**

As the river system cut canyons into the basalt, differences in resistance to erosion resulted in the formation of relatively flat structural benches on the canyon sides. These benches were mantled by a mix of material derived from the basalt platform, loess, and colluvium from adjacent canyon walls. Soils that formed in loess and deep





**Figure 31.—Area of Newlig silt loam, 5 to 20 percent slopes, on terraces above the Clearwater River. Kettenbach-Keuterville association, 35 to 75 percent slopes, is on south-facing slopes in foreground.**

weathered basalt include those of the Jacket series (Pachic Ultic Argixerolls), Driscoll series (Ultic Argixerolls), and Kooskia series (Xeric Argialbolls) ([fig. 32](#)). These soils are strongly developed; they have a thick mollic epipedon and argillic horizon that are very high in content of clay. The argillic horizon appears to have formed in a paleosol, and it commonly has high shrink-swell potential. Soils such as those of the Klickson series (Vitrandic Argixerolls) and Keuterville series (Ultic Argixerolls) commonly are in areas of colluvial deposits on benches. These soils are high in content of rock fragments. They have a thinner mollic epipedon and argillic horizon that are lower in content of clay than those of the other soils on benches. The Klickson series has a small amount of volcanic ash mixed into the surface layer.

### **Canyonsides**

Soils on canyonsides commonly are more weakly developed than are those on benches ([fig. 33](#)). Geologic erosion is active, so the colluvial and residual parent material are relatively young. Windblown deposits influence these soils, with loess in the lower part of the canyons and a mixture of loess and volcanic ash in the middle and upper parts of the canyons. Aspect and climate have a strong influence on the formation of soils on canyonsides. Precipitation increases rapidly moving up the canyons toward the Clearwater Mountains. A complex pattern of soils formed as a result of this strong moisture gradient and the microclimates of the various aspects.

In the drier lower part of the canyons, the soils are influenced by a slower rate of weathering, the grassland or open forest vegetation, and strong wetting and drying cycles during the year. These lead to the formation of a mollic epipedon, a somewhat thinner soil mantle, and an argillic horizon in areas where the soil material has sufficient thickness. Soils of the Gwin series (Lithic Argixerolls) and Kettenbach series (Pachic Argixerolls) are on convex, south- and west-facing slopes in areas of





**Figure 32.—Kooskia and Driscoll soils formed on these structural benches above the Clearwater River drainageway.**



**Figure 33.—Area of Rock outcrop-Whiskeycreek-Texascreek complex, 40 to 70 percent slopes, along the Clearwater River.**

grassland vegetation. These soils formed in a relatively thin mantle of basalt colluvium and residuum. Soils of the Keuterville series (Ultic Argixerolls) are on north- and east-facing slopes that have deeper deposits of colluvium and can support open ponderosa pine forests. At the lower elevations in the canyons and on some of the higher slopes, erosion has exposed metamorphic basement rock. Soils derived from metamorphic rock tend to have less clay and more sand than those derived from basalt. As a result, they have a weaker argillic horizon and more rapid internal drainage. Soils of the Whiskeycreek series (Lithic Ultic Haploxerolls) formed in mixed deposits of colluvium and residuum derived from metamorphic material on convex, south- and west-facing slopes. Deeper soils of the Texas creek series (Ultic Haploxerolls) and Fordcreek series (Ultic Haploxeralfs) are on concave, north- and east-facing slopes.

Annual precipitation increases as elevation in the canyons increases. At the moister middle elevations of the canyons, colluvial deposits are deep and open forests with a brushy understory are dominant on all aspects. Soils that have a mollic epipedon and an argillic horizon are dominant. The Keuterville and Fordcreek soils are on convex, south- and west-facing slopes. In areas of basalt colluvium, Klickson soils (Vitrandic Argixerolls) are on concave, north- and east-facing slopes. The Klickson soils have a mollic epipedon that has some volcanic ash influence.

The upper elevations of the canyons receive the most moisture, and the vegetation grades from brushy forests to dense forests with an understory of nongrassy forbs. A thick colluvial mantle overlies residuum. The contribution of volcanic ash to the soil surface is more pronounced. Soils in these areas tend to have an ochric epipedon and a relatively weakly expressed argillic horizon or none at all. In areas of basalt parent material, soils of the Agatha series (Vitrandic Haploxeralfs) and Campra series (Vitrandic Hapludalfs) are on the drier, convex, south- and west-facing slopes. These soils have an admixture of volcanic ash in the upper part. Elkridge soils are on concave, north- and east-facing slopes. These soils have a thin mantle that is dominantly volcanic ash and forms a recognizable cap over the colluvium. In areas of metamorphic rock, soils such as those of the Kruse series (Vitrandic Haploxeralfs) and Uvi series (Vitrandic Haploxerepts) are on convex, south- and west-facing slopes. Aldermand soils (Vitrandic Eutrudepts) are on concave, north- and east-facing slopes. These soils also have volcanic ash in the upper part.

## **Plateau**

Soil profile development on the plateau has produced a complex pattern and sequence of soils. The kinds of soil horizons that formed commonly have been determined by several factors. Among these are the occurrence, location, and properties of paleosols or other old weathering surfaces within the modern profile and variations in the age and type of parent material. The older loess-derived material commonly shows evidence of reworking by stream action, especially near the mountain front. Loess deposits become thinner moving eastward across the plateau; thus, weathered basalt material forms part of the soil profile in some of these areas. In other areas, the basalt has formed embayments within the mountain front. This resulted in damming of local streams and deposition of alluvial material on the basalt surface. The variations in climate also strongly influence soil development.

## **Flood Plains and Terraces**

Stream systems of the plateau are eroding and transporting material that consists dominantly of loess. These alluvial deposits are primarily composed of silt- and clay-sized particles. Coarse sand and gravel are rare, except in areas where streams exit the mountains. Soils of the broad flood plains and low terraces generally have had sufficient time to form pronounced horizons. Many of these soils are subject to annual ponding, even those that are not often flooded.



Soils of the Latahco series (Argiaquic Xeric Argialbolls) and Lebaron series (Aquandic Palexeralfs) are along streams in the lowest areas of the plateau. These soils have a clay-rich argillic horizon and a strong eluvial horizon. The Latahco soils have a mollic epipedon. Traces of carbonate accumulation are in the profile in some areas. This appears to be the result of leaching of carbonates from overlying material into the noncalcareous matrix of the deeper subsoil.

Soils of the Lewhand series (Vitrandic Fragiudalfs), Burntcreek series (Vitrandic Hapludolls) and Teneb series (Aquandic Epiqualfs) are in the Weippe Basin. The Teneb soils are also throughout the eastern part of the plateau (fig. 34). The Lewhand and Teneb soils have an argillic horizon that is a fragipan. This horizon appears to have formed in a paleosol overlain by more recently deposited material. Both soils have a strong eluvial horizon above the paleosol and stratified layers of alluvial deposits at some depth below the argillic horizon. They commonly support meadow vegetation, as the extreme seasonal wetness and the root-limiting layer prevent the establishment of most woody species.

### Uplands

The lowest elevations of the plateau support an open forest that contributes significant quantities of organic matter to the upper part of the soil. The soil temperature regime in these areas is mesic. The soils formed in a relatively thin layer of recent late-Pleistocene loess over older loess material containing a paleosol. The Driscoll series (Ultic Palexerolls) formed on summits and shoulders of hills, generally on convex slopes. These soils have a thin layer of young loess over a paleosol that has a strongly expressed, clayey argillic horizon. The slow permeability of the argillic horizon causes water to flow laterally along its abrupt upper boundary. A well-developed eluvial horizon has formed above the argillic horizon. The soils generally are well leached of carbonates, although a layer of carbonate accumulation is at a



Figure 34.—Early spring flowers (grasswidow) growing in a poorly drained meadow in an area of Teneb soils.

depth of more than 50 inches in some areas. As a result of the high content of clay in the argillic horizon, the soils have a high potential for sinking and swelling when the content of moisture changes.

Soils of the Southwick series (Oxyaquic Argixerolls) are in positions similar to those of the Driscoll soils. These soils also have an argillic horizon that formed in a paleosol. This horizon generally has a lower content of clay than that of the Driscoll soils. The argillic horizon exhibits some properties of a fragipan, including high bulk density, coarse prismatic structure, and slow permeability.

Soils of the Larkin series (Ultic Argixerolls) are closely associated with the Driscoll and Southwick soils on the landscape. The Larkin soils commonly are on plane to concave backslopes and footslopes. The argillic horizon is at a greater depth in these soils and is more weakly expressed. A distinct paleosol cannot be identified in these soils. The Larkins soils do not have an eluvial horizon, and they are completely leached of carbonates.

The middle elevations of the plateau and some north- to east-facing slopes of the hills at the lower elevations support Douglas-fir forests. The soil temperature regime in these areas is frigid, and the effective precipitation is higher than that of the ponderosa pine areas. Soils of the Setters series (Ultic Palexerolls) and Taney series (Vitrandic Argixerolls) generally are on the convex hillslopes and summits (fig. 35). These soils are similar to the Driscoll and Southwick soils, but the Taney soils have a fully expressed fragipan. A fragipan is a dense, brittle subsoil horizon that has a distinct morphology. The formation of a fragipan is not well understood. In this survey area, soils that have a fragipan begin at the ponderosa pine/Douglas-fir forest transitional area and extend to the mountain front. The area of fragipan formation is roughly parallel to isolines of precipitation, temperature, and vegetation types. This strongly



Figure 35.—Area on the plateau, northwest of Ahsahka. Joel and Taney soils are on the concave and convex hillslopes, and Setters soils are on the footslopes along the drainageways. Carlinton soils are in the background, in an area that transitions from Douglas-fir to grand fir habitat types.

suggests a relationship between climate and the formation of a fragipan as a result of an unknown mechanism (Busacca, 1989). The Setters soils also are on footslopes along drainageways in some areas. Alluvial reworking and deposition of clay-rich material from the paleosols or other highly weathered deposits have produced a clay-rich argillic horizon in these areas. The Joel series (Alfic Argixerolls) are in plane to concave, lower lying areas. These soils are similar to the Larkin soils.

Soils of the Carlinton series (Vitrandic Fragixeralfs), Reggear series (Vitrandic Fraglossudalfs), and Statemeadow series (Vitrandic Hapludalfs) formed in the climatic zone associated with forest types that consist dominantly of grand fir. The influence of volcanic ash in the surface horizon is more pronounced in this zone, but a distinct volcanic ash mantle is thin or absent. The Carlinton and Reggear soils have a thin deposit of recent loess over a fully expressed fragipan. The soils have an eluvial horizon that is well developed. Local relief in these areas generally is subdued. The soils that have a fragipan are on convex and smooth summits and backslopes. This zone, which at the transition from a xeric to a udic moisture regime, has some of the most strongly expressed fragipans in the survey area. The Statemeadow soils do not have a fragipan, but they have a well developed argillic horizon derived from loess or weathered basalt that commonly has been reworked by alluvial processes. These soils generally are on the steeper slopes.

The extreme eastern margin of the loess-covered plateau supports a dense forest that consists dominantly of western redcedar. The temperatures are cool, and moisture is abundant. A distinct volcanic ash cap is on most of the soils, and it is more than 14 inches thick in some areas. Soils of the Kauder series (Andic Fragiudalfs) and Threebear series (Alfic Udivitrands) are composed of volcanic ash and recent loess over a fragipan that formed in a paleosol. They are on broad summits and gently sloping side slopes. They have a well developed eluvial horizon. The recent loess is thin enough and the water movement through the soil sufficient enough that the eluvial horizon has begun to expand into and degrade the paleosol. A glossic horizon with clay- and iron-depleted E material tonguing into the underlying argillic horizon is common. Associated with the fragipan soils on the landscape are soils of the Grangemont series (Andic Glossludalfs) and Norwidge series (Alfic Udivitrands). These soils also have a distinct ash cap. They have fragic material, but it is not in quantities sufficient to form a fragipan. Eluvial material commonly is throughout the profile, surrounding prisms of brittle fragic material and nonbrittle argillic material. These soils are on steeper side slopes, footslopes, and some summits, in areas where moisture appears to have fully degraded the fragipan or has prevented the formation of a fragipan.

Thinning of the loess deposit at the eastern edge of the plateau also allows areas of material derived from basalt to be close enough to the land surface to make up all or part of the soil profile. These areas do not have a paleosol with slow permeability to restrict vertical movement of water in the profile. As a result, a strongly expressed eluvial horizon is absent, but eluvial material may coat the subsoil material within the argillic horizon. Soils of the Riswold series (Andic Hapludalfs) are in areas where volcanic ash and loess overlie basalt residuum and colluvium derived dominantly from the Grand Ronde member of the Columbia River Basalt Group. These soils have an argillic horizon that begins in the thin loess mantle beneath the volcanic ash cap and extends into the underlying basalt material. The horizons that consist of material derived from basalt commonly are high in content of hard rock fragments. These soils generally are on ridge summits and shoulders. Soils of the Placer series (Vitrandic Hapludalfs) and Dowper series (Alfic Udivitrands) formed in mixed volcanic ash and loess over basalt of the Saddle Mountain Formation. This basalt flowed over the plateau in relatively confined areas and produced a complex system of steep and narrow ridges. Erosion has removed any trace of a separate loess mantle above the



basalt. The soils have a clay-rich argillic horizon that contains soft rock fragments and formed in the weathered basalt material. The Placer soils are in convex positions; therefore, the volcanic ash material is eroded or mixed into the underlying basalt residuum. The Dowper soils are in concave positions; therefore, they have a thick volcanic ash cap.

A third group of soils is on the plateau margin, where small embayments into the mountain front dammed local drainageways. As the stream systems established new channels, they moved over the basalt surface and deposited bodies of alluvium during the Miocene. These were later eroded into dissected areas of steep, narrow ridges. Erosion removed most of the thin mantle of loess that may have been deposited in these areas. Soils of the Jaype series (Andic Hapludalfs) and Revling series (Alfic Udivitrands) formed in this old alluvial material. These soils commonly are stratified with several layers of contrasting textures. The Jaype soils are in the more convex positions on ridgetops and side slopes. They have a thinner mantle of ash and have a clay-rich argillic horizon that has slow permeability and contains highly weathered kaolinite clay. The Revling soils are in concave positions of side slopes and footslopes and have a thicker mantle of ash. Both of these soils commonly contain broken fragments of an ironstone pan that formed some time in the past. The presence of ironstone is assumed to indicate that a very warm, wet climate existed in the area during or shortly after the deposition of this sediment.

## Mountains

The mountains of the survey area are remnants of a deeply dissected plateau. Downcutting by streams has produced a complex series of ridges with long, concordant summits. The maximum elevation in the survey area is less than 6,000 feet; however, the slopes are steep and local relief commonly is more than 1,000 feet. The bedrock geology of the mountains is quite varied, and a thick mantle of volcanic ash mixed with loess covers the mountainous area. The soils on steep slopes are composed of a mantle of colluvium over weathered residual material. They generally have only weak horizon development and have a very low content of clay. Pockets of alluvium and other sediment are on some saddles and low ridge summits, and the soils in these areas are more strongly expressed. Thin loess deposits are in some areas near the plateau. The entire mountain region receives more than 30 inches of precipitation annually, and it supports dense forests of mixed conifers. Soils at the low and middle elevations are exposed to strong chemical weathering due to the high amount of moisture received and the relatively warm temperatures. The colluvial material consists of sand- and silt-sized particles. Abundant rock fragments are in the soils in areas of resistant rock types or near rock outcroppings. At elevations of more than about 4,800 feet, the colder temperatures slow the rate of chemical weathering and promote active freeze-thaw cycles. In these areas, physical weathering processes are dominant in soil formation. Soils at these higher elevations commonly have a high content of rock fragments. The cold, moist conditions also result in a higher accumulation of organic matter in these soils.

## Flood Plains and Terraces

Aquandic Endoaquepts and Aquandic Cryaquepts are on flood plains in the mountains ([fig. 36](#)). These soils formed in coarse textured material and exhibit only weakly expressed horization. A high content of volcanic ash material is in the surface layer. The plant communities in these areas consist dominantly of species such as Sitka alder, ladyfern, and arrowleaf groundsel. These soils commonly are affected by cold air drainage.

Soils of the Hildebrand series (Andic Hapludalfs), Spacecreek series (Oxyaquic Udivitrands), and Trappercreek series (Typic Haplocryands) are on terraces. They have loamy to silty textures and have small quantities of rounded rock fragments in





**Figure 36.—Grice mucky peat in an area of Aquandic Cryaquepts, 0 to 5 percent slopes.**

some areas. They have weakly developed horizons and a volcanic ash cap. Some profiles have weak redoximorphic features. These soils support healthy forest stands.

### **Uplands**

Soils of the Jacot series (Alfic Udivitrands) and Dullaxe series (Typic Udivitrands) are common in areas of granitic geology. These soils have a thick mantle of volcanic ash. The Jacot soils are on slightly more convex upper slopes and ridge shoulders in areas where the presence of clay films in some pores below the ash cap is assumed to indicate that clay has translocated into the subsoil. The Dullaxe soils are in smooth to concave areas and do not have clay films ([fig. 37](#)). Both of these soils have a loam or sandy loam subsoil that grades with increasing depth into material that is high in content of coarse sand and fine gravel.

Soils of the Brodeer series (Alfic Udivitrands) are in areas of gneissic geology. These soils are similar to the Jacot soils in that they have a weak incipient argillic horizon. This horizon is low in content of clay and is recognizable by the presence of translocated clay in pores below the thick mantle of ash. The Brodeer soils are loam or sandy loam throughout the profile and do not have the coarser material that is present in the subsoil of the soils derived from granitic material. The Brodeer soils are on all but the most sharply convex slopes. Soils of the Mushel series (Andic Hapludalfs) are in steep, convex areas where the mantle of volcanic ash is thinner. These soils have a very weakly expressed argillic horizon and are low in content of clay. The Mushel soils are in areas of both granite and gneiss geologies. Soils of the Boulder creek series



Figure 37.—Grandad Bridge over the Dworshak Reservoir. Aldermand ashy loam, 35 to 75 percent slopes, is in foreground, and Dullaxe complex, 35 to 75 percent slopes, is in background.

(Typic Udivitrands) are on steep, smooth and concave slopes. They are associated with gneiss and quartzite, which are more resistant to weathering. They commonly formed in a thick colluvial mantle and have a thick volcanic ash cap. The Boulder creek soils have only weak horizon development. Active colluvial processes prevent the formation of even a weak argillic horizon. Because these soils formed in material that is more resistant to weathering, the content of rock fragments is very high.

Areas of schist commonly produce soils that have a high content of mica. Soils of the Grandad series (Alfic Udivitrands) and Rettig series (Typic Udivitrands) are in these areas. The Grandad soils are in the more stable, convex and smooth positions where a weak argillic horizon has begun to form. The Rettig soils are in less stable, smooth to concave positions where slope processes are more active and horizonation is very weak. Soils of the Township series (Typic Udivitrands) are also on steep, smooth to concave slopes. They commonly are associated with areas of Rock outcrop. Similar to the Boulder creek soils, these soils are in areas of strong colluvial action and thus have weakly expressed horizons and a high content of rock fragments. The Grandad, Rettig, and Township soils all have a thick mantle of volcanic ash.

At elevations of more than about 4,800 feet, the climate is very cold and moist. The forest consists dominantly of species such as subalpine fir and mountain hemlock. Soils of the Vaywood series (Typic Haplocryands) are in areas of metamorphic and granitic rock. They do not have strong horizonation and have a dark-colored surface layer that is high in content of organic matter. Some of these soils have a high content of rock fragments in the subsoil, which is beneath a mantle of volcanic ash. Soils of the Weitas series (Vitric Fulvicryands) are in concave areas on the upper mountain slopes. They support a Sitka alder/miner's lettuce plant community. These areas appear to be affected by heavy accumulations of snow and a risk of avalanches, which hinder the establishment of conifers. Because of the high annual turnover of organic matter due to leaf fall and the growth of forbs, the Weitas soils have a very thick, organic-rich surface horizon. Because of their position on the slopes, they also have a high degree

of mixing of volcanic ash material into the upper layers of the profile. They have only weak development in the subsoil.

Small areas of alluvial material or other sediment are in the mountainous region near the North Fork Clearwater River and its major tributaries (fig. 38). These deposits are on large saddles, low ridge summits, and structural benches. They commonly are high above the current drainageways. Some soils, such as the Hugus series (Alfic Udivitrands), formed in old alluvium. They have a well developed argillic and eluvial horizon and have many rounded rock fragments. Others soils, such as the Elkberry series (Alfic Udivitrands) and Odonnell series (Alfic Udivitrands), formed in sediment that is a mixture of alluvium and reworked loess and/or local colluvial and residual material. These soils have a well developed argillic horizon and glossic alluvial material.



**Figure 38.—Area north of Dent Bridge, along the Dworshak Reservoir. Aldermand ashy loam, 35 to 75 percent slopes, is on the steeper slopes; Elkrigde-Riswold complex, 20 to 40 percent slopes, is on the moderate slopes, and Bandmill-Riswold complex, 5 to 20 percent slopes, is in the gently sloping areas.**





# References

---

- Alexander, R.R. 1967. Site indexes for Engelmann spruce in the central Rocky Mountains. U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station Research Paper RM-32.
- Allen, J.E., M. Burns, and S.C. Sargent. 1986. Cataclysms on the Columbia. Timber Press, Portland, Oregon.
- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Anderson, A.L. 1956. The geology and mineral resources of the region about Orofino, Idaho. Idaho Bureau of Mines and Geology, Idaho Geological Survey Pamphlet 34.
- Busacca, A.J. 1989. Long Quaternary record in eastern Washington, U.S.A., interpreted from multiple buried paleosols in loess. *Geoderma* 45:105-122.
- Busacca, A.J. 1991. Loess deposits and soils of the Palouse and vicinity. *In* *Geology of North America*. Volume K-2.
- Busacca, A.J., H.M. Parks, and R. Rossi. 2001. Volcanic glass in soils of the Columbia Plateau, Pacific Northwest, U.S.A. *Soil Science Society of America Journal* 65:161-168.
- Camp, V.E., P.R. Hooper, D.A. Swanson, and T.L. Wright. 1982. Columbia River Basalt in Idaho: Physical and chemical characteristics, flow distribution, and tectonic implications. *In* *Cenozoic Geology of Idaho*. Idaho Bureau of Mines and Geology Bulletin 26.
- Cochran, P.H. 1979. Gross yields for even-aged stands of Douglas-fir and white or grand fir east of the Cascades in Oregon and Washington. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station Research Paper PNW-263.
- Cooper, S.V., K.E. Neiman, and D.W. Roberts. 1991. Forest habitat types of northern Idaho: A second approximation. U.S. Department of Agriculture, Forest Service, Intermountain Research Station General Technical Report INT-236.
- Fiedler, Carl E., and Dennis A. Lloyd. 1995. Autecology and Synecology of western larch. *In* *Ecology and Management of Larix Forests: A Look Ahead*. U.S. Department of Agriculture, Forest Service, General Technical Report GTR-INT-319.

## Soil Survey of Clearwater Area, Idaho

- Freeman, O.W., J.D. Forrester, and R.L. Lupher. 1945. Physiographic subdivisions of Idaho. *In* Annals of the Association of American Geographers. Volume XXXV, number 2.
- Graham, Russell T., Alan E. Harvey, Martin F. Jurgensen, Theresa B. Jain, Jonalea R. Tonn, and Deborah S. Page-Dumroese. 1994. Managing coarse woody debris in forests of the Rocky Mountains. U.S. Department of Agriculture, Forest Service, Intermountain Research Station Research Paper INT-RP-477.
- Griggs, A.B. 1981. Geologic map of the Spokane Quadrangle, Washington, Idaho, and Montana. U.S. Geological Survey Miscellaneous Investigations Map I-768.
- Heitanen, A. 1984. Geology along the northwest border zone of the Idaho Batholith, Northern Idaho. U.S. Geological Survey Bulletin 1608.
- Hubbard, C.R. 1955. A survey of the mineral resources of Idaho. Idaho Bureau of Mines and Geology, Idaho Geological Survey Pamphlet 105.
- Hyndman, D.W. 1989. Formation of the northern Idaho Batholith and the related mylonite of the western Idaho suture zone. V.E. Chamberlain, R.M. Breckenridge, and B. Bonnicksen, editors. *In* Guidebook to the Geology of Northern and Western Idaho and Surrounding Area. Idaho Geological Survey Bulletin 28.
- Lewis, Reed S. 2003. Geologic history of the Potlatch 30' x 60' Quadrangle, Idaho. Draft manuscript. Idaho Geological Survey.
- McDonald, E.V., and A.J. Busacca. 1988. Record of pre-late Wisconsin giant floods in the channeled scabland interpreted from loess deposits. *In* Geology. Volume 16.
- Meyer, W.H. 1938. Yield of even-aged stands of ponderosa pine. U.S. Department of Agriculture Technical Bulletin 630.
- O'Laughlin, Jay, James G. MacCracken, David L. Adams, Stephen C. Bunting, Keith A. Blatner, and Charles E. Keegan, III. 1993. Forest health conditions in Idaho. Idaho Forest, Wildlife, and Range Policy Analysis Group, University of Idaho, Moscow.
- Othberg, K.L. 1982. Surficial geologic map of the Pullman Quadrangle, Idaho. Idaho Bureau of Mines and Geology, Idaho Geological Survey.
- Othberg, Kurt L., Daniel W. Weisz, and Roy M. Breckenridge. 2002. Surficial geologic map of the Southwick Quadrangle, Clearwater and Nez Perce Counties, Idaho. Digital Web Map 2. Idaho Geological Survey.
- O'Geen, A.T., P.A. McDaniel, and J. Boll. 2002. Chloride distributions as indicators of vadose zone stratigraphy in Palouse loess deposits. *Vadose Zone Journal* 1:150-157.
- Portland Cement Association. 1962. PCA soil primer.
- Reidel, S.P. 1982. Stratigraphy of the Grande Ronde Basalt, Columbia River Basalt Group, from the Lower Salmon River and Northern Hells Canyon area, Idaho, Oregon and Washington. B. Bonnicksen and R.M. Breckenridge, editors. *In* Cenozoic Geology of Idaho. Idaho Geological Survey Bulletin 26.



## Soil Survey of Clearwater Area, Idaho

- Rember, W.C., and E.H. Bennett. 1979a. Geologic map of the Hamilton Quadrangle, Idaho. Idaho Bureau of Mines and Geology, Idaho Geological Survey.
- Rember, W.C., and E.H. Bennett. 1979b. Geologic map of the Pullman Quadrangle, Idaho. Idaho Bureau of Mines and Geology, Idaho Geological Survey.
- Ross, C.P., and J.D. Forrester. 1958. Outline of the geology of Idaho. Idaho Bureau of Mines and Geology, Idaho Geological Survey Bulletin 15.
- Schmidt, W.C., R.C. Shearer, and A.L. Roe. 1976. Ecology and silviculture of western larch forests. U.S. Department of Agriculture, Forest Service, Technical Bulletin 1520.
- Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson, editors. 2002. Field book for describing and sampling soils. Version 2.0. U.S. Department of Agriculture, Natural Resources Conservation Service.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
- Soil Survey Staff. 1998. Keys to soil taxonomy. 8th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
- Stover, C.W., B.G. Reagor, and S.T. Algermisson. 1986. Seismicity map of the state of Idaho. U.S. Geological Survey Miscellaneous Field Studies Map MF-1857.
- United States Department of Agriculture, Natural Resources Conservation Service. 2001. Soil survey of Lewis and Nez Perce Counties, Idaho.
- United States Department of Agriculture, Natural Resources Conservation Service. 2002. Soil survey of St. Joe Area, Parts of Benewah and Shoshone Counties, Idaho.
- United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296.
- United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.
- United States Department of Agriculture, Soil Conservation Service. 1978. Palouse cooperative river basin study.
- United States Department of Agriculture, Soil Conservation Service. 1981. Soil survey of Latah County Area, Idaho.
- United States Department of Agriculture, Soil Conservation Service. 1982. National list of scientific plant names. Technical Publication 159, volumes 1-2.



# Glossary

---

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the "National Soil Survey Handbook" (available in local offices of the Natural Resources Conservation Service or on the Internet).

**ABC soil.** A soil having an A, a B, and a C horizon.

**AC soil.** A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

**Aeration, soil.** The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

**Aggregate, soil.** Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

**Alkali (sodic) soil.** A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

**Alluvial fan.** A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

**Alluvium.** Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

**Alpha,alpha-dipyridyl.** A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

**Animal unit month (AUM).** The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

**Aquic conditions.** Current soil wetness characterized by saturation, reduction, and redoximorphic features.

**Argillic horizon.** A subsoil horizon characterized by an accumulation of illuvial clay.

**Aspect.** The direction toward which a slope faces. Also called slope aspect.

**Association, soil.** A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

**Available water capacity (available moisture capacity).** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low .....	0 to 3
Low .....	3 to 6
Moderate.....	6 to 9
High .....	more than 9

- Backslope.** The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.
- Basal area.** The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.
- Basalt.** A fine-grained, dark-colored extrusive igneous rock composed primarily of calcic plagioclase and pyroxene, with or without olivine.
- Base saturation.** The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.
- Base slope** (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).
- Bedding system.** A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.
- Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.
- Bedrock-controlled topography.** A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.
- Bottom land.** An informal term loosely applied to various portions of a flood plain.
- Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.
- Breaks.** A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.
- Breast height.** An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.
- Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.
- Bulk density.** The mass of soil per unit bulk volume. Moist bulk density refers to the oven-dry weight of a given volume of soil with moisture content at or near field moisture capacity.
- Butte.** An isolated, small mountain or hill with steep or precipitous sides and a flat, rounded, or pointed top that may be a residual mass isolated by erosion or an exposed volcanic neck.
- Cable yarding.** A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.
- Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.
- Calcium carbonate equivalent.** The quantity of carbonates (CO<sub>3</sub>) in the soil, expressed as CaCO<sub>3</sub> and as a percentage, by weight, of the fraction less than 2 millimeters in size.
- Canopy.** The leafy crown of trees or shrubs. (See Crown.)
- Canyon.** A long, deep, narrow valley with high, precipitous walls in an area of high local relief.

- Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.
- Carbonates.** Chemical compounds containing the carbonate ion  $\text{CO}_3$  in combination with bases such as calcium, magnesium, potassium, and sodium.
- Catena.** A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.
- Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.
- Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.
- Chemical treatment.** Control of unwanted vegetation through the use of chemicals.
- Chiseling.** Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.
- Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.
- Clay depletions.** See Redoximorphic features.
- Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.
- Claypan.** A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.
- Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.
- Coarse fragments.** Mineral or rock fragments larger than 2 millimeters in diameter.
- Coarse textured soil.** Sand or loamy sand.
- Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.
- Cobbly soil material.** Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.
- Colluvium.** Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (for example, direct gravitational action) and by local, unconcentrated runoff.
- Compaction.** The increase in soil bulk density as a result of applied loads or pressure. Compaction reduces porosity, water infiltration, and root penetration.
- Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.
- Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.
- Concretions.** See Redoximorphic features.
- Conservation cropping system.** Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting

crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

**Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

**Consistence, soil.** Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

**Contour stripcropping.** Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

**Control section.** The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

**Corrosion** (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

**Corrosion** (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

**Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

**Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

**Cropping system.** Growing crops according to a planned system of rotation and management practices.

**Cross fencing.** Fencing that divides a pasture into two or more areas and allows for managing the distribution of livestock.

**Cross-slope farming.** Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

**Crown.** The upper part of a tree or shrub, including the living branches and their foliage.

**Culmination of the mean annual increment (CMAI).** The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

**Decreasers.** The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

**Deferred grazing.** Postponing grazing or resting grazing land for a prescribed period.

**Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

**Diagnostic horizons.** Combinations of specific soil characteristics that are indicative of certain classes of soils. Those that occur at the soil surface are called



epipedons, and those that occur below the soil surface are called diagnostic subsurface horizons.

**Divided-slope farming.** A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

**Drainage class** (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained*, *somewhat excessively drained*, *well drained*, *moderately well drained*, *somewhat poorly drained*, *poorly drained*, and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

**Drainage, surface.** Runoff, or surface flow of water, from an area.

**Drainageway.** A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

**Draw.** A small stream valley that generally is more open than a ravine or gulch and that has a broader bottom.

**Duff.** A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

**Duripan.** A subsurface soil horizon that is cemented by illuvial silica, commonly opal or microcrystalline forms of silica, to the degree that less than 50 percent of the volume of air-dry fragments will slake in water or hydrochloric acid.

**Ecological site.** An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

**Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

**Endosaturation.** A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

**Eolian soil material.** Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the soil surface.

**Ephemeral stream.** A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

**Episaturation.** A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

**Erosion.** The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

*Erosion* (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building

up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

*Erosion* (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

**Escarpment.** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

**Extrusive rock.** Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth's surface.

**Fallow.** Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

**Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

**Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.

**Fine textured soil.** Sandy clay, silty clay, or clay.

**Flood plain.** The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

**Fluvial.** Of or pertaining to rivers or streams; produced by stream or river action.

**Foothills.** A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

**Footslope.** The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

**Forb.** Any herbaceous plant not a grass or a sedge.

**Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.

**Forest type.** A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

**Forestland.** Land on which the historic vegetation was dominated by a 25 percent overstory canopy cover of trees, as determined by crown perimeter-vertical projection. A tree is defined as a woody-stemmed plant that can grow to 4 meters (about 13 feet) in height at maturity.

**Fragipan.** A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

**Frost action** (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings, and other structures and plant roots.

**Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

**Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

- Gradient terrace.** A terrace constructed to move water to a stable outlet. (See Terrace.)
- Granite.** A coarse-grained igneous rock consisting mainly of quartz and feldspar, with more orthoclase than plagioclase. (See Granodiorite.)
- Grassed waterway.** A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.
- Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.
- Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.
- Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.
- Ground water.** Water filling all the unblocked pores of the material below the water table.
- Gully.** A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.
- Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.
- Hard to reclaim** (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.
- Hardpan.** A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.
- Head out.** To form a flower head.
- Head slope** (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.
- High-residue crops.** Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.
- Hill.** A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.
- Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:
- O horizon.*—An organic layer of fresh and decaying plant residue.
- A horizon.*—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.
- E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

*B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

*C horizon.*—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

*Cr horizon.*—Consolidated bedrock beneath the soil that has an extremely weakly cemented to moderately cemented rupture-resistance class.

*R horizon.*—Consolidated bedrock beneath the soil that has a strongly cemented or stronger rupture-resistance class.

**Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.

**Hydrologic soil groups.** Refers to soils grouped according to their runoff potential.

The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

**Igneous rock.** Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

**Illuviation.** The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

**Increasers.** Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

**Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

**Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

**Interfluve.** An elevated area between two drainageways that sheds water to those drainageways.

**Intermittent stream.** A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

**Invaders.** On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

**Iron depletions.** See Redoximorphic features.

**Knoll.** A small, low, rounded hill rising above adjacent landforms.

**Ksat.** See Saturated hydraulic conductivity.

**Lacustrine deposit.** Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

**Landform.** Any physical, recognizable form or feature on the earth's surface that has a characteristic shape and range in composition and is produced by natural causes; it can span a wide range in size. Landforms provide an empirical description of similar portions of the earth's surface.

**Landscape (soils).** An assemblage, group, or family of spatially related, natural landforms over a relatively large area; the land surface which the eye can comprehend in a single view.

**Landslide.** A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

**Large stones** (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

**Leaching.** The removal of soluble material from soil or other material by percolating water.

**Leeward.** Being in or facing the direction toward which the wind is blowing.

**Light textured soil.** Sand and loamy sand.

**Linear extensibility.** Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at  $\frac{1}{3}$ - or  $\frac{1}{10}$ -bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

**Liquid limit.** The moisture content at which the soil passes from a plastic to a liquid state.

**Loam.** Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

**Loess.** Material transported and deposited by wind and consisting dominantly of silt-sized particles.

**Low-residue crops.** Crops such as peas, beans, potatoes, and corn used for silage. Residue from these crops is not adequate to control erosion. These crops return little organic matter to the soil.

**Low strength.** The soil is not strong enough to support loads.

**Low-residue crops.** Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

**Major Land Resource Area (MLRA).** A broad geographic land area characterized by a particular pattern of soils, geology, climate, water resources, and land use. An area is typically continuous, but small separate areas can occur.

**Masses.** See Redoximorphic features.

**Mechanical treatment.** Use of mechanical equipment for seeding, brush management, and other management practices.

**Medium textured soil.** Very fine sandy loam, loam, silt loam, or silt.

**Metamorphic rock.** Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

**Microclimate.** The climate of a small distinct area, as of a forest or city, or a confined space, as of a building or greenhouse.

**Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.



- Minimum tillage.** Only the tillage essential to crop production and prevention of soil damage.
- Miscellaneous area.** A kind of map unit component that has little or no natural soil and supports little or no vegetation.
- Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.
- Moderately fine textured soil.** Clay loam, sandy clay loam, or silty clay loam.
- Moisture control section.** The layer within a soil profile used to determine the soil moisture regime. The upper boundary is the depth to which a dry soil is moistened by 1 inch of water in 24 hours. The lower boundary is the depth to which a dry soil is moistened by 3 inches of water in 48 hours.
- Mollic epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.
- Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.
- Mottling, soil.** Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few*, *common*, and *many*; size—*fine*, *medium*, and *coarse*; and contrast—*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).
- Mountain.** A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.
- Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.
- Natric horizon.** A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.
- Neutral soil.** A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)
- Nodules.** See Redoximorphic features.
- Nose slope** (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).
- Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.
- Organic matter.** Plant and animal residue in the soil in various stages of decomposition.
- Overstory.** The trees in a forest stand that form the upper crown cover. (See Understory.)
- Pan.** A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan*, *fragipan*, *claypan*, *duripan*, *placic horizon*, *plowpan*, and *traffic pan*.
- Parent material.** The unconsolidated organic and mineral material in which soil forms.



**Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.

**Pedisediment.** A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

**Pedon.** The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

**Percolation.** The movement of water through the soil.

**Permeability.** The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual” and in this glossary. Terms describing permeability, measured in inches per hour, are as follows:

Very slow .....	less than 0.06 inch
Slow .....	0.06 to 0.2 inch
Moderately slow.....	0.2 to 0.6 inch
Moderate.....	0.6 inch to 2.0 inches
Moderately rapid .....	2.0 to 6.0 inches
Rapid .....	6.0 to 20 inches
Very rapid.....	more than 20 inches

See “Saturated hydraulic conductivity” for conversions of inches per hour to micrometers per second.

**pH value.** A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

**Phase, soil.** A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

**Piping** (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

**Plastic limit.** The moisture content at which a soil changes from semisolid to plastic.

**Plasticity index.** The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

**Plateau** (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

**Pleistocene.** The epoch of geologic time from approximately 10,000 to 2 million years ago. The earlier of the two epochs comprising the Quaternary period. Also called the Glacial epoch.

**Plowpan.** A compacted layer formed in the soil directly below the plowed layer.

**Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

**Potential native plant community.** See Climax plant community.

**Potential rooting depth (effective rooting depth).** Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

**Prescribed burning.** Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

**Productivity, soil.** The capability of a soil for producing a specified plant or sequence of plants under specific management.

**Profile, soil.** A vertical section of the soil extending through all its horizons and into the parent material.

**Proper grazing use.** Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

**Pulse crop.** A crop that produces edible seeds, such as peas and lentils.

**Range condition.** The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

**Range site.** An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

**Rangeland.** Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

**Reaction, soil.** A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Extremely acid .....	less than 4.5
Very strongly acid .....	4.5 to 5.0
Strongly acid .....	5.1 to 5.5
Moderately acid .....	5.6 to 6.0
Slightly acid .....	6.1 to 6.5
Neutral .....	6.6 to 7.3
Slightly alkaline .....	7.4 to 7.8
Moderately alkaline .....	7.9 to 8.4
Strongly alkaline .....	8.5 to 9.0
Very strongly alkaline .....	9.1 and higher

**Redoximorphic concentrations.** See Redoximorphic features.

**Redoximorphic depletions.** See Redoximorphic features.

**Redoximorphic features.** Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
  - A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
  - B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*

C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. Redoximorphic depletions.—These are zones of low chroma (chroma less than that of the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:

A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*

B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletalans).

3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

**Reduced matrix.** See Redoximorphic features.

**Relief.** The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

**Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

**Riparian.** Refers to areas adjacent to water or wetlands; vegetation is dependent on water or use and management directly impacts the water or wetlands.

**Road cut.** A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

**Rock fragments.** Rock or mineral fragments that are 2 millimeters in diameter or more (i.e., gravel, cobbles, stones, and boulders). Rock fragments have a strongly cemented or stronger rupture-resistance class.

**Rock outcrop.** Exposures of bare bedrock.

**Root zone.** The part of the soil that can be penetrated by plant roots.

**Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

**Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

**Sandstone.** Sedimentary rock containing dominantly sand-sized particles.

**Saprolite.** Unconsolidated residual material underlying the soil and grading to hard bedrock below.

**Saturated hydraulic conductivity (Ksat).** The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are *very high*, 100 or more micrometers per second (14.17 or more inches per hour); *high*, 10 to 100 micrometers per second (1.417 to 14.17 inches per hour); *moderately high*, 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour); *moderately low*, 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour); *low*, 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour); and *very low*, less than 0.01 micrometer per second (less than 0.001417 inch per hour). To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

**Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

**Second bottom.** The first terrace above the normal flood plain, or first bottom, of a river.

**Sedimentary rock.** A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

**Seepage** (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

**Series, soil.** A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

**Shale.** Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

**Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

**Shoulder.** The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

**Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

**Side slope** (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

**Silica.** A combination of silicon and oxygen. The mineral form is called quartz.

**Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

**Siltstone.** An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

**Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

**Site curve (50-year).** A set of related curves on a graph that shows the average height of dominant trees for the range in ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant trees that are 50 years old or are 50 years old at breast height.

**Site curve (100-year).** A set of related curves on a graph that shows the average height of dominant and codominant trees for the range in ages on soils that differ in productivity. Each level is represented by a curve. The basis of the curves is the height of dominant and codominant trees that are 100 years old or are 100 years old at breast height.

**Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height

attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

**Slickensides** (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

**Slick spot.** A small area of soil that has a puddled, crusted, or smooth surface and an excessive amount of exchangeable sodium. The soil generally is silty or clayey, slippery when wet, and low in productivity.

**Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level .....	0 to 2 percent
Gently sloping .....	2 to 8 percent
Strongly sloping .....	8 to 15 percent
Moderately steep .....	15 to 25 percent
Steep .....	25 to 60 percent
Very steep .....	60 percent and higher

Classes for complex slopes are as follows:

Nearly level .....	0 to 2 percent
Undulating .....	2 to 8 percent
Rolling .....	8 to 15 percent
Hilly .....	15 to 25 percent
Steep .....	25 to 60 percent
Very steep .....	60 percent and higher

**Slope** (in tables). Slope is steep enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

**Slow water movement** (in tables). Restricted downward movement of water through the soil. (See Saturated hydraulic conductivity.)

**Sodic (alkali) soil.** A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

**Sodicity.** The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of  $\text{Na}^+$  to  $\text{Ca}^{++} + \text{Mg}^{++}$ . The degrees of sodicity and their respective ratios are:

Slight .....	less than 13:1
Moderate .....	13-30:1
Strong .....	more than 30:1

**Sodium adsorption ratio (SAR).** A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

**Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

**Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

**Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

## Soil Survey of Clearwater Area, Idaho

Very coarse sand .....	2.0 to 1.0
Coarse sand .....	1.0 to 0.5
Medium sand .....	0.5 to 0.25
Fine sand .....	0.25 to 0.10
Very fine sand .....	0.10 to 0.05
Silt .....	0.05 to 0.002
Clay.....	less than 0.002

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

**Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

**Stoniness (or boulderiness).** The relative proportion of larger rock fragments on the surface layer. Used as map unit phase designation for soils containing sufficient amounts of stones and boulders to impose important restrictions on use and management. These phases should not be confused with the use of fragments as textural modifiers. The four phases recognized in this survey are:

*Stony (or bouldery).*—The areas have enough stones and boulders at or near the surface to be a continuing nuisance during operations that mix the surface layer, but they do not make most such operations impractical. Conventional, wheeled vehicles can move with reasonable freedom over the area. Rocks may damage both the equipment that mixes the soil and the vehicles that move on the surface. Large rock fragments cover about 0.01 to 0.1 percent of the surface.

*Very stony (or very bouldery).*—The areas have so many stones and boulders at or near the surface that operations that mix the surface layer either require heavy equipment or use of implements that can operate between the larger ones. Tillage with conventionally powered farm equipment is impractical. Wheeled tractors and vehicles with high clearance can operate on carefully chosen routes over and around stones and boulders. Large rock fragments cover about 0.1 to 3 percent of the surface.

*Extremely stony (or extremely bouldery).*—The areas have so many stones and boulders at or near the surface that wheeled powered equipment, other than some special types, can operate only along selected routes. Tracked vehicles can be used in most places, although some routes have to be cleared. Large rock fragments cover about 3 to 15 percent of the surface.

*Rubbly and very rubbly.*—The areas have so many stones and boulders at or near the surface that tracked vehicles cannot be used in most places. Large rock fragments cover about 15 to 90 percent of the surface.

**Stony.** Refers to a soil containing stones in numbers that interfere with or prevent tillage.

**Stripcropping.** Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Substratum.** The part of the soil below the solum.



- Subsurface layer.** Technically, the E horizon. Generally refers to a leached horizon lighter in color and lower in content of organic matter than the overlying surface layer.
- Summer fallow.** The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.
- Summit.** The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.
- Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”
- Surface soil.** The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.
- Talus.** Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.
- Taxadjuncts.** Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.
- Terrace (conservation).** An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.
- Terrace.** (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.
- Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, and clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”
- Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use.
- Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.
- Toeslope.** The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.
- Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
- Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

**Udic.** A soil moisture regime common to a climate that has moisture throughout the year. The soil moisture control section is dry for less than 45 consecutive days during the 4 months following the summer solstice.

**Understory.** Plants in a forest community that grow to a height of 4.5 feet or less.

**Upland.** An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

**Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

**Weathering.** All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

**Windthrow.** The uprooting and tipping over of trees by the wind.

**Xeric.** A soil moisture regime common to a climate having moist winters and dry summers. The soils are dry in the moisture control section for more than 45 consecutive days during the 4 months following the summer solstice and are moist for more than 45 consecutive days during the 4 months following the winter solstice.

# Tables

---

Table 1.—Temperature and Precipitation

(Recorded in the period 1971 to 2000 at Dworshak Fish Hatchery [2845], Elk River 1 S [2892 [4150], Idaho)

Month	Temperature						Preci-	
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of	12 years in will have--	
	°F	°F	°F	°F	°F	growing degree days*	Less than--	More than--
DWORSHAK FISH HATCHERY								
January----	39.3	26.5	32.9	56	3	7	2.87	1.66
February----	46.2	29.1	37.7	62	7	36	2.33	1.43
March-----	55.4	33.8	44.6	74	21	159	2.41	1.58
April-----	64.1	38.9	51.5	87	29	342	2.35	1.38
May-----	72.3	45.3	58.8	96	32	582	2.53	1.55
June-----	79.5	51.3	65.4	100	39	756	1.69	0.96
July-----	88.7	55.8	72.2	105	44	999	1.20	0.27
August-----	89.8	55.2	72.5	106	44	1,007	0.91	0.26
September---	79.5	47.3	63.4	99	33	701	1.32	0.27
October-----	64.6	38.7	51.6	86	26	363	1.67	0.55
November----	47.4	32.8	40.1	65	15	74	3.23	1.90
December----	39.2	27.4	33.3	54	6	9	2.98	1.57
Yearly:								
Average---	63.8	40.2	52.0	---	---	---	---	---
Extreme---	110	-11	---	107	-2	---	---	---
Total-----	---	---	---	---	---	5,034	25.49	21.46

Table 1.—Temperature and Precipitation—Continued

Month	Temperature										Preci-	
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average	Average number of		12 years in will have--			
	°F	°F	°F	°F	°F	°F	growing degree days*	growing degree days*	In	In	Less than--	More than--
ELK RIVER 1 S												
January----	34.2	17.8	26.0	47	-15	0	4.82	2.98	6.			
February----	39.6	20.2	29.9	56	-9	1	4.14	2.15	6.			
March-----	46.5	25.3	35.9	65	6	23	3.17	1.92	4.			
April-----	54.3	31.1	42.7	79	18	124	2.37	1.29	3.			
May-----	63.5	37.3	50.4	88	24	321	3.03	2.01	3.			
June-----	71.2	43.2	57.2	93	30	512	2.33	1.34	3.			
July-----	79.8	46.2	63.0	96	33	704	1.46	0.34	2.			
August-----	81.1	44.9	63.0	97	31	707	1.10	0.31	1.			
September---	71.2	37.2	54.2	92	24	421	1.72	0.39	3.			
October-----	58.3	29.9	44.1	81	16	158	2.39	0.68	4.			
November-----	41.2	25.7	33.4	61	1	16	4.61	2.73	6.			
December-----	33.6	18.5	26.1	48	-12	1	15.41	2.62	7.			
Yearly:												
Average---	56.2	31.4	43.8	---	---	---	---	---	---			
Extreme---	104	-31	---	98	-21	---	---	---	---			
Total-----	---	---	---	---	---	2,989	46.54	30.59	39.			

Table 1.—Temperature and Precipitation—Continued

Month	Temperature										Preci-
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average	Average of		12 years in		
	°F	°F	°F	°F	°F	Maximum higher than--	Minimum lower than--	growing degree days*	In	In	will have--
HEADQUARTERS								Units	In	In	
January-----	35.0	17.9	26.5	51	-15			0	5.13	2.85	7.
February----	39.9	19.5	29.7	58	-9			2	4.29	2.62	5.
March-----	45.6	24.2	34.9	66	5			19	3.65	2.37	4.
April-----	54.4	28.9	41.6	80	15			102	3.14	1.83	4.
May-----	63.1	35.2	49.1	88	23			260	3.20	1.99	4.
June-----	70.6	41.8	56.2	94	29			449	2.51	1.12	3.
July-----	79.6	45.1	62.3	96	33			650	1.44	0.32	2.
August-----	81.0	44.1	62.5	97	32			637	1.35	0.34	2.
September---	70.4	36.6	53.5	92	23			379	1.46	0.43	2.
October-----	57.3	29.7	43.5	80	17			132	2.65	1.07	4.
November-----	42.2	25.3	33.7	64	4			18	5.40	3.15	7.
December----	34.5	19.1	26.8	49	-7			0	5.26	2.88	7.
Yearly:											
Average---	56.1	30.6	43.4	---	---			---	---	---	---
Extreme---	100	-25	---	99	-17			---	---	---	---
Total-----	---	---	---	---	---			2,650	39.47	14.95	47.

\* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature at which growth is minimal for the principal crops in the area (40 degrees F).



# Soil Survey of Clearwater Area, Idaho

**Table 2.**—Freeze Dates in Spring and Fall

(Recorded in the period 1971 to 2000 at Dworshak Fish Hatchery [2845], Elk River 1 S [2892], and Headquarters [4150], Idaho)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
<b>DWORSHAK FISH HATCHERY</b>			
Last freezing temperature in spring:			
1 year in 10 later than-----	March 18	April 12	May 4
2 years in 10 later than-----	March 9	April 4	April 29
5 years in 10 later than-----	February 21	March 20	April 18
First freezing temperature in fall:			
1 year in 10 earlier than---	October 28	October 14	September 27
2 years in 10 earlier than---	November 6	October 22	October 3
5 years in 10 earlier than---	November 23	November 6	October 15
<b>ELK RIVER 1 S</b>			
Last freezing temperature in spring:			
1 year in 10 later than-----	May 4	June 6	June 29
2 years in 10 later than-----	April 28	May 28	June 21
5 years in 10 later than-----	April 16	May 12	June 5
First freezing temperature in fall:			
1 year in 10 earlier than---	September 23	September 8	August 21
2 years in 10 earlier than---	September 29	September 14	August 27
5 years in 10 earlier than---	October 11	September 25	September 7

# Soil Survey of Clearwater Area, Idaho

Table 2.—Freeze Dates in Spring and Fall—Continued

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
HEADQUARTERS			
Last freezing temperature in spring:			
1 year in 10 later than-----	May 17	June 3	July 3
2 years in 10 later than-----	May 9	May 28	June 25
5 years in 10 later than-----	April 25	May 16	June 12
First freezing temperature in fall:			
1 year in 10 earlier than---	September 20	September 8	August 19
2 years in 10 earlier than---	September 27	September 13	August 26
5 years in 10 earlier than---	October 10	September 22	September 8

# Soil Survey of Clearwater Area, Idaho

**Table 3.**—Growing Season

(Recorded in the period 1971 to 2000 at Dworshak Fish Hatchery [2845], Elk River 1 S [2892], and Headquarters [4150], Idaho)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	<i>Days</i>	<i>Days</i>	<i>Days</i>
DWORSHAK FISH HATCHERY			
9 years in 10	238	197	154
8 years in 10	250	208	163
5 years in 10	275	230	179
2 years in 10	299	251	195
1 year in 10	311	263	203
ELK RIVER 1 S			
9 years in 10	152	101	64
8 years in 10	161	113	75
5 years in 10	178	134	97
2 years in 10	195	156	119
1 year in 10	204	167	131
HEADQUARTERS			
9 years in 10	139	103	62
8 years in 10	150	113	72
5 years in 10	170	131	91
2 years in 10	189	150	110
1 year in 10	200	159	119

# Soil Survey of Clearwater Area, Idaho

Table 4.-Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1	Agatha-Rock outcrop complex, 35 to 75 percent slopes-----	4,077	0.4
2	Agatha ashy silt loam, 15 to 40 percent slopes-----	2,530	0.3
3	Agatha ashy silt loam, 40 to 75 percent slopes-----	3,735	0.4
4	Ahsahka-Fordcreek complex, 20 to 40 percent slopes-----	1,615	0.2
5	Ahsahka-Whiskeycreek complex, 35 to 55 percent slopes-----	269	*
6	Aldermand ashy loam, 35 to 75 percent slopes-----	16,687	1.8
7	Aldermand ashy loam, 35 to 70 percent slopes-----	1,008	0.1
8	Aldermand ashy loam, dry, 35 to 70 percent slopes-----	4,321	0.5
9	Aquandic Cryaquepts, 0 to 5 percent slopes-----	3,422	0.4
10	Aquandic Endoaquepts and Aquandic Dystrudepts soils, 0 to 10 percent slopes-----	2,700	0.3
11	Bandmill-Grangemont-Bargamin complex, 10 to 35 percent slopes-----	2,337	0.3
12	Bandmill-Riswold complex, 5 to 20 percent slopes-----	3,286	0.4
13	Berthahill-Handoff complex, 15 to 35 percent slopes-----	436	*
14	Berthahill-Handoff complex, 35 to 75 percent slopes-----	1,838	0.2
15	Berthahill-Shattuck complex, 15 to 35 percent slopes-----	1,618	0.2
16	Bigtalk, cool-Bigtalk, wet complex, 35 to 65 percent slopes-----	1,938	0.2
17	Bigtalk loam, 35 to 65 percent slopes-----	2,228	0.2
18	Bigtalk-Floodwood complex, 15 to 35 percent slopes-----	1,923	0.2
19	Bigtalk-Keeler complex, 15 to 35 percent slopes-----	144	*
20	Boulder creek ashy loam, 15 to 35 percent slopes-----	1,267	0.1
21	Boulder creek ashy silt loam, 35 to 65 percent slopes-----	1,357	0.1
22	Boulder creek ashy silt loam, 35 to 75 percent slopes-----	4,647	0.5
23	Boulder creek, moist-Brodeer complex, 35 to 70 percent slopes-----	5,437	0.6
24	Boulder creek-Brodeer complex, 35 to 70 percent slopes-----	6,778	0.7
25	Boulder creek-Judgetown complex, 35 to 75 percent slopes-----	3,719	0.4
26	Boulder creek-Marblecreek association, 35 to 65 percent slopes-----	2,083	0.2
27	Boulder creek-Rettig complex, 45 to 90 percent slopes-----	3,290	0.4
28	Brequito ashy silt loam, 25 to 50 percent slopes-----	134	*
29	Brequito-Grangemont complex, 20 to 45 percent slopes-----	3,669	0.4
30	Brequito-Lado complex, 15 to 35 percent slopes-----	17,108	1.9
31	Brequito-Lado complex, 5 to 15 percent slopes-----	1,060	0.1
32	Brequito-Mushel complex, 15 to 35 percent slopes-----	3,848	0.4
33	Brequito-Mushel complex, 35 to 75 percent slopes-----	2,786	0.3
34	Brodeer, dry-Brodeer complex, 15 to 35 percent slopes-----	6,502	0.7
35	Brodeer-Mushel complex, 15 to 35 percent slopes-----	2,634	0.3
36	Brodeer, warm-Mushel, dry complex, 15 to 35 percent slopes-----	1,198	0.1
37	Brodeer-Boulder creek complex, 15 to 40 percent slopes-----	1,523	0.2
38	Brodeer-Flewsie complex, 30 to 60 percent slopes-----	12,270	1.3
39	Brodeer-Lostpete complex, 15 to 45 percent slopes-----	6,089	0.7
40	Brodeer-Lostpete complex, moist, 15 to 35 percent slopes-----	979	0.1
41	Brodeer, dry-Mushel complex, 35 to 60 percent slopes-----	19,796	2.2
42	Brodeer-Mushel complex, 35 to 75 percent slopes-----	32,839	3.6
43	Burntcreek ashy loam, 0 to 3 percent slopes-----	793	*
44	Campira gravelly ashy silt loam, 40 to 75 percent slopes-----	5,171	0.6
45	Campira-Sly complex, 10 to 35 percent slopes-----	4,938	0.5
46	Carlinton ashy silt loam, 20 to 30 percent slopes-----	750	*
47	Carlinton ashy silt loam, 3 to 20 percent slopes-----	6,158	0.7
48	Carlinton-Kruse complex, 5 to 20 percent slopes-----	2,269	0.2
49	Carlinton-Seddow complex, 3 to 15 percent slopes-----	4,342	0.5
50	Caseycreek ashy silt loam, 2 to 15 percent slopes-----	724	*
51	Cavendish silt loam, 2 to 8 percent slopes-----	292	*
52	Cavendish-Taney complex, 8 to 20 percent slopes-----	4,182	0.5
53	Cobbler-Aldermand complex, 35 to 75 percent slopes-----	1,706	0.2
54	Cobbler-Noil complex, 45 to 75 percent slopes-----	1,589	0.2
55	Cranberry-Riswold complex, 20 to 45 percent slopes-----	2,172	0.2
56	Crumarine silt loam, 0 to 3 percent slopes-----	353	*
57	Dam-----	23	*
58	Driscoll silt loam, 3 to 12 percent slopes-----	1,023	0.1
59	Driscoll-Larkin complex, 12 to 25 percent slopes-----	2,036	0.2
60	Dullaxe, high elevation-Dullaxe association, 30 to 60 percent slopes-----	1,167	0.1

See footnote at end of table.

# Soil Survey of Clearwater Area, Idaho

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
61	Dullaxe, dry-Dullaxe, wet complex, 35 to 75 percent slopes-----	2,416	0.3
62	Dullaxe-Brodeer complex, 10 to 40 percent slopes-----	28,021	3.0
63	Dullaxe-Brodeer complex, 40 to 70 percent slopes-----	4,311	0.5
64	Dullaxe-Judgetown complex, 35 to 70 percent slopes-----	43,909	4.8
65	Dullaxe-Judgetown, moist complex, 35 to 55 percent slopes-----	6,646	0.7
66	Dullaxe-Jury complex, 35 to 65 percent slopes-----	1,732	0.2
67	Dumps, wood slash-----	165	*
68	Dworshak ashy silt loam, 35 to 50 percent slopes-----	2,708	0.3
69	Dworshak-Brequito complex, 15 to 35 percent slopes-----	5,962	0.6
70	Elkberry-Elkberry, wet complex, 15 to 35 percent slopes-----	2,673	0.3
71	Elkberry-Dworshak complex, 15 to 40 percent slopes-----	608	*
72	Elkridge-Riswold complex, 20 to 40 percent slopes-----	9,678	1.1
73	Elkridge-Riswold complex, 40 to 70 percent slopes-----	19,872	2.2
74	Fico-Hucherit complex, 40 to 70 percent slopes-----	283	*
75	Fico-Weitas complex, 20 to 40 percent slopes-----	2,594	0.3
76	Flewsie ashy silt loam, 35 to 65 percent slopes-----	393	*
77	Flewsie, low precipitation-Flewsie, dry complex, 30 to 60 percent slopes	475	*
78	Floodwood ashy silt loam, 35 to 65 percent slopes-----	245	*
79	Floodwood, warm-Keeler complex, 35 to 65 percent slopes-----	738	*
80	Floodwood-Keeler complex, 15 to 35 percent slopes-----	3,336	0.4
81	Floodwood-Keeler complex, 35 to 65 percent slopes-----	512	*
82	Flumecreek ashy loam, 35 to 65 percent slopes-----	1,735	0.2
83	Flumecreek-Stepoff-Dworshak complex, 15 to 35 percent slopes-----	1,677	0.2
84	Fordcreek loam, 40 to 75 percent slopes-----	1,232	0.1
85	Fordcreek loam, 5 to 15 percent slopes-----	211	*
86	Garveson-Floodwood complex, 35 to 65 percent slopes-----	80	*
87	Gramil-Lewhand complex, 0 to 2 percent slopes-----	538	*
88	Gramil-Reggear complex, 2 to 6 percent slopes-----	987	0.1
89	Grandad ashy silt loam, 15 to 40 percent slopes-----	2,673	0.3
90	Grandad, dry-Grandad complex, 15 to 40 percent slopes-----	4,475	0.5
91	Grandad, dry-Grandad complex, 40 to 60 percent slopes-----	5,326	0.6
92	Grandad-Rettig complex, 15 to 35 percent slopes-----	4,450	0.5
93	Grandad-Rettig complex, 35 to 65 percent slopes-----	2,292	0.2
94	Grandad-Scand complex, 35 to 65 percent slopes-----	148	*
95	Grangemont-Kauder complex, 5 to 20 percent slopes-----	38,397	4.2
96	Grangemont-Kauder complex, dry, 5 to 20 percent slopes-----	2,117	0.2
97	Grangemont-Kauder complex, 5 to 30 percent slopes-----	1,228	0.1
98	Grangemont-Riswold complex, 10 to 35 percent slopes-----	1,444	0.2
99	Grasshopper ashy loam, 0 to 3 percent slopes-----	1,517	0.2
100	Gwin-Kettenbach complex, 35 to 75 percent slopes-----	3,243	0.4
101	Gwin-Kettenbach-Keuterville complex, 10 to 25 percent slopes-----	309	*
102	Hildebrand-Spacecreek complex, 2 to 12 percent slopes-----	2,328	0.3
103	Hubub ashy silt loam, 20 to 40 percent slopes-----	1,852	0.2
104	Hubub-Dworshak complex, 5 to 20 percent slopes-----	412	*
105	Hubub-Lostpete complex, 10 to 30 percent slopes-----	700	*
106	Hucherit medial silt loam, 15 to 40 percent slopes-----	1,409	0.2
107	Hucherit-Vaywood complex, 35 to 70 percent slopes-----	1,571	0.2
108	Hugus ashy silt loam, 15 to 35 percent slopes-----	836	*
109	Hugus ashy silt loam, 35 to 75 percent slopes-----	1,870	0.2
110	Hugus ashy silt loam, moist, 15 to 30 percent slopes-----	575	*
111	Hugus ashy silt loam, moist, 30 to 65 percent slopes-----	166	*
112	Hugus, moist-Hugus complex, 35 to 75 percent slopes-----	2,115	0.2
113	Hugus-Dworshak complex, 15 to 35 percent slopes-----	295	*
114	Itzee sandy loam, 0 to 12 percent slopes-----	636	*
115	Jacket silt loam, 12 to 30 percent slopes-----	711	*
116	Jacket silt loam, 3 to 12 percent slopes-----	921	0.1
117	Jacket-Wellsbench complex, 20 to 35 percent slopes-----	1,798	0.2
118	Jacot-Garveson complex, 15 to 35 percent slopes-----	1,602	0.2
119	Jacot-Garveson complex, 35 to 65 percent slopes-----	1,469	0.2
120	Jaype-Revling complex, 5 to 40 percent slopes-----	6,822	0.7
121	Jaype-Revling complex, dry, 5 to 40 percent slopes-----	3,476	0.4

See footnote at end of table.

# Soil Survey of Clearwater Area, Idaho

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
122	Jaype-Statemeadow complex, 10 to 45 percent slopes-----	2,392	0.3
123	Joel-Setters complex, 5 to 20 percent slopes-----	2,252	0.2
124	Johnson loam, 45 to 65 percent slopes-----	1,873	0.2
125	Johnson-Swayne complex, 20 to 40 percent slopes-----	2,212	0.2
126	Johnson-Swayne complex, 40 to 75 percent slopes-----	337	*
127	Johnson-Texas creek complex, 35 to 75 percent slopes-----	4,399	0.5
128	Jury medial silt loam, 10 to 30 percent slopes-----	370	*
129	Jury medial silt loam, 30 to 65 percent slopes-----	2,250	0.2
130	Jury medial silt loam, cold, 30 to 65 percent slopes-----	1,779	0.2
131	Jury-Weitas complex, 25 to 60 percent slopes-----	1,380	0.1
132	Jury-Weitas complex, 5 to 25 percent slopes-----	1,296	0.1
133	Kauder ashy silt loam, 5 to 20 percent slopes-----	16,517	1.8
134	Keeler, dry-Keeler complex, 35 to 70 percent slopes-----	1,624	0.2
135	Keeler, moist-Keeler complex, 35 to 75 percent slopes-----	3,796	0.4
136	Keeler-Aldermand complex, 35 to 70 percent slopes-----	1,419	0.2
137	Keeler-Jacot complex, 30 to 55 percent slopes-----	196	*
138	Keeler-Lado complex, 10 to 35 percent slopes-----	2,270	0.2
139	Kettenbach-Gwin-Rock outcrop complex, 45 to 75 percent slopes-----	2,205	0.2
140	Kettenbach-Keuterville association, 35 to 75 percent slopes-----	3,141	0.3
141	Keuterville gravelly silt loam, 10 to 25 percent slopes-----	742	*
142	Keuterville gravelly silt loam, 25 to 50 percent slopes-----	1,662	0.2
143	Keuterville-Rock outcrop complex, 35 to 90 percent slopes-----	1,466	0.2
144	Klickson ashy silt loam, 15 to 35 percent slopes-----	3,080	0.3
145	Klickson ashy silt loam, 35 to 90 percent slopes-----	5,228	0.6
146	Klickson-Agatha association, 35 to 75 percent slopes-----	4,053	0.4
147	Klickson-Kettenbach association, 35 to 90 percent slopes-----	1,511	0.2
148	Klickson-Rock outcrop-Kettenbach complex, 45 to 90 percent slopes-----	3,877	0.4
149	Konkol-Revling complex, 5 to 40 percent slopes-----	3,728	0.4
150	Kooskia silt loam, 10 to 20 percent slopes-----	885	*
151	Kooskia silt loam, 3 to 10 percent slopes-----	1,880	0.2
152	Kruse ashy loam, 20 to 35 percent slopes-----	158	*
153	Kruse ashy loam, 35 to 65 percent slopes-----	1,417	0.2
154	Kruse-Aldermand complex, 20 to 40 percent slopes-----	444	*
155	Kruse-Aldermand complex, 40 to 65 percent slopes-----	3,716	0.4
156	Kruse-McCrosket complex, 35 to 65 percent slopes-----	936	0.1
157	Kruse-Noil complex, 20 to 35 percent slopes-----	4,331	0.5
158	Kruse-Teakean complex, 20 to 45 percent slopes-----	1,236	0.1
159	Larkin-Driscoll complex, 25 to 50 percent slopes-----	1,146	0.1
160	Lebaron-Latahco complex, 0 to 3 percent slopes-----	1,938	0.2
161	Lewhand-Burntcreek complex, 0 to 2 percent slopes-----	2,244	0.2
162	Lewhand-Teneb complex, 0 to 2 percent slopes-----	1,221	0.1
163	Longbar-Bigtalk complex, 15 to 35 percent slopes-----	140	*
164	Longbar-Bigtalk complex, 35 to 65 percent slopes-----	983	0.1
165	Longpen ashy silt loam, 20 to 40 percent slopes-----	2,372	0.3
166	Longpen ashy silt loam, 5 to 20 percent slopes-----	1,302	0.1
167	Meland-Jacket complex, 5 to 20 percent slopes-----	424	*
168	Meland-Keuterville complex, 10 to 35 percent slopes-----	221	*
169	Mushel-Brodeer complex, 15 to 35 percent slopes-----	30,257	3.3
170	Mushel-Dullaxe complex, 35 to 70 percent slopes-----	15,667	1.7
171	Nakarna ashy silt loam, 15 to 35 percent slopes-----	271	*
172	Nakarna ashy silt loam, 35 to 65 percent slopes-----	794	*
173	Nakarna-Nakarna, warm complex, 35 to 65 percent slopes-----	298	*
174	Narnett-Jury complex, 15 to 30 percent slopes-----	8,395	0.9
175	Neva ashy silt loam, 35 to 70 percent slopes-----	8,143	0.9
176	Newlig silt loam, 5 to 20 percent slopes-----	187	*
177	Noil-Keeler complex, 40 to 75 percent slopes-----	3,888	0.4
178	Noil-Boulder creek-Rock outcrop complex, 45 to 85 percent slopes-----	4,228	0.5
179	Norwidge-Threebear complex, moist, 5 to 25 percent slopes-----	983	0.1
180	Odonnell-Grandad complex, 10 to 35 percent slopes-----	5,497	0.6
181	Odonnell medial silt loam, 15 to 35 percent slopes-----	112	*
182	Oxyaquic Xerofluvents-Itzee complex, 0 to 5 percent slopes-----	986	0.1

See footnote at end of table.



# Soil Survey of Clearwater Area, Idaho

Table 4.-Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
183	Pits, quarry-----	94	*
184	Placer-Dowper-Grangemont complex, 15 to 40 percent slopes-----	7,257	0.8
185	Poorman ashy loam, 35 to 65 percent slopes-----	5,267	0.6
186	Poorman, dry-Poorman complex, 15 to 35 percent slopes-----	2,056	0.2
187	Poorman-Grandad complex, 15 to 35 percent slopes-----	9,513	1.0
188	Poorman-Grandad complex, 35 to 75 percent slopes-----	8,390	0.9
189	Poorman-Grandad, dry complex, 15 to 35 percent slopes-----	164	*
190	Poorman-Grandad, dry complex, 35 to 65 percent slopes-----	2,063	0.2
191	Reggear-Kauder complex, 5 to 20 percent slopes-----	16,729	1.8
192	Reggear-Seddow complex, 5 to 15 percent slopes-----	7,628	0.8
193	Rettig ashy loam, 35 to 60 percent slopes-----	238	*
194	Rettig ashy loam, 15 to 35 percent slopes-----	307	*
195	Rettig ashy loam, cold, 15 to 35 percent slopes-----	536	*
196	Rettig, cool-Rettig, dry complex, 35 to 65 percent slopes-----	959	0.1
197	Rettig-Grandad complex, 35 to 70 percent slopes-----	14,582	1.6
198	Rettig-Township complex, 35 to 60 percent slopes-----	9,847	1.1
199	Rettig-Township-Stepoff complex, 35 to 70 percent slopes-----	2,158	0.2
200	Riswold-Cranberry complex, 5 to 20 percent slopes-----	1,305	0.1
201	Riswold-Grangemont complex, 15 to 35 percent slopes-----	25,589	2.8
202	Rock outcrop-Whiskeycreek-Texas creek complex, 40 to 70 percent slopes----	3,087	0.3
203	Scaler ashy silt loam, 15 to 35 percent slopes-----	8,306	0.9
204	Scaler-Grandad complex, 35 to 60 percent slopes-----	209	*
205	Scaler-Grangemont complex, 15 to 45 percent slopes-----	1,121	0.1
206	Scand-Scaler complex, 15 to 35 percent slopes-----	1,650	0.2
207	Seddow ashy silt loam, 15 to 25 percent slopes-----	2,398	0.3
208	Seddow ashy silt loam, 25 to 50 percent slopes-----	787	*
209	Seddow ashy silt loam, 5 to 15 percent slopes-----	950	0.1
210	Setters silt loam, 3 to 8 percent slopes-----	573	*
211	Shattuck ashy silt loam, 15 to 35 percent slopes-----	2,629	0.3
212	Shattuck ashy silt loam, 35 to 65 percent slopes-----	3,285	0.4
213	Shattuck ashy silt loam, moist, 35 to 65 percent slopes-----	2,184	0.2
214	Shattuck-Dworshak complex, moist, 15 to 40 percent slopes-----	195	*
215	Shattuck-Dworshak complex, 15 to 35 percent slopes-----	288	*
216	Sly-Wilkins complex, 3 to 15 percent slopes-----	1,584	0.2
217	Southwick silt loam, 3 to 12 percent slopes-----	714	*
218	Southwick-Larkin complex, 12 to 25 percent slopes-----	915	*
219	Statemeadow-Reggear complex, 5 to 15 percent slopes-----	2,187	0.2
220	Swayne silt loam, 10 to 35 percent slopes-----	467	*
221	Taney ashy silt loam, 3 to 10 percent slopes-----	8,881	1.0
222	Taney-Joel complex, 10 to 20 percent slopes-----	3,691	0.4
223	Taney-McCrosket complex, 15 to 35 percent slopes-----	853	*
224	Taney-Setters complex, 3 to 8 percent slopes-----	3,661	0.4
225	Taney-Setters complex, 8 to 20 percent slopes-----	2,096	0.2
226	Teakean ashy silt loam, 35 to 50 percent slopes-----	415	*
227	Teneb ashy silt loam, 0 to 2 percent slopes-----	4,113	0.4
228	Texas creek-Rock outcrop complex, 45 to 75 percent slopes-----	3,896	0.4
229	Texas creek-Whiskeycreek complex, 35 to 75 percent slopes-----	2,554	0.3
230	Norwidge-Threebear complex, 5 to 25 percent slopes-----	12,763	1.4
231	Tomodo ashy silt loam, dry, 20 to 40 percent slopes-----	2,420	0.3
232	Tomodo-Lado complex, 15 to 35 percent slopes-----	3,429	0.4
233	Township-Rettig complex, 15 to 35 percent slopes-----	1,036	0.1
234	Township-Rettig complex, 35 to 75 percent slopes-----	21,474	2.3
235	Township-Rettig-Nakarna complex, 35 to 65 percent slopes-----	4,062	0.4
236	Trappercreek-Narnett complex, 5 to 15 percent slopes-----	3,278	0.4
237	Uvi ashy loam, 35 to 75 percent slopes-----	3,387	0.4
238	Uvi ashy silt loam, 35 to 75 percent slopes-----	9	*
239	Vaywood, high precipitation-Vaywood, dry complex, 15 to 35 percent slopes	565	*
240	Vaywood medial silt loam, 35 to 75 percent slopes-----	1,056	0.1
241	Vaywood-Handoff complex, 15 to 35 percent slopes-----	2,205	0.2
242	Water-----	20,753	2.3
243	Wellsbench silt loam, 2 to 10 percent slopes-----	243	*

See footnote at end of table.

# Soil Survey of Clearwater Area, Idaho

Table 4.-Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
244	Wellsbench-Lacy complex, 25 to 55 percent slopes-----	674	*
245	Wilkins silt loam, 0 to 5 percent slopes-----	1,359	0.1
	Total-----	920,572	100.0

\* Less than 0.1 percent.

**Table 5.**—Ecological Sites, Plant Associations, and Characteristic Plant Communities

(Composition of forest understory based on percent canopy cover; composition of range sites based

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
1: Agatha, very rocky-----	Grand fir/ninebark (CN506)			
		Favorable	500	Mallow ninebark
		Normal	350	Other shrubs
		Unfavorable	200	Common snowberry
				Oceanspray
				Pinegrass
				Dwarf rose
				Other perennial forbs
				Rocky Mountain maple
				Saskatoon serviceberry
				Woodland strawberry
Rock outcrop-----	---	---	---	---
2: Agatha-----	Grand fir/ninebark (CN506)			
		Favorable	650	Mallow ninebark
		Normal	400	Other shrubs
		Unfavorable	150	Common snowberry
				Oceanspray
				Pinegrass
				Dwarf rose
				Other perennial forbs
				Rocky Mountain maple
				Saskatoon serviceberry
				Woodland strawberry
3: Agatha-----	Grand fir/ninebark (CN506)			
		Favorable	650	Mallow ninebark
		Normal	400	Other shrubs
		Unfavorable	150	Common snowberry
				Oceanspray
				Pinegrass
				Dwarf rose
				Other perennial forbs
				Rocky Mountain maple
				Saskatoon serviceberry
				Woodland strawberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
4:				Lb/acre	
Ahsahka-----	Ponderosa pine/Idaho fescue (CN140)	Favorable	1,000		Idaho fescue
		Normal	800		Bluebunch wheatgrass
		Unfavorable	600		Arrowleaf balsamroot
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Western yarrow
Fordcreek-----	Ponderosa pine/Idaho fescue (CN140)	Favorable	1,000		Idaho fescue
		Normal	800		Bluebunch wheatgrass
		Unfavorable	600		Arrowleaf balsamroot
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Western yarrow
5:					
Ahsahka-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
Whiskeycreek----	SHALLOW SOUTH SLOPE STONY 16-22	Favorable	850		Bluebunch wheatgrass
	PSSPS-POSE (R009XY0261D)	Normal	650		Sandberg bluegrass
		Unfavorable	400		Arrowleaf balsamroot
					Bent milkvetch
					Cous biscuitroot
					Narrowleaf skullcap
					Other perennial forbs
					Penstemon
					Silky lupine
					Wyeth buckwheat

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
6: Aldermand-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plant	
7: Aldermand-----	Western hemlock/queencup beadlily (CN570)	Favorable Normal Unfavorable	300 175 50	Other shrubs Other perennial forbs Longtube twinflower Western goldthread Blue huckleberry Bunchberry dogwood Darkwoods violet False Solomon's seal Myrtle boxwood Oneleaf foamflower Queencup beadlily Western rattlesnake plant	
8: Aldermand, dry--	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50	Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities—

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
9: Aquandic Cryaquepts-----MEADOW (R009XY018ID)			Lb/acre		
		Favorable	4,500	Other perennial forbs	
		Normal	3,500	Tufted hairgrass	
		Unfavorable	2,500	Nebraska sedge	
				Alpine timothy	
				Baltic rush	
				Other shrubs	
10: Aquandic Endoaquepts-----MEADOW (R009XY018ID)					
		Favorable	4,500	Other perennial forbs	
		Normal	3,500	Tufted hairgrass	
		Unfavorable	2,500	Nebraska sedge	
				Alpine timothy	
				Baltic rush	
				Other shrubs	
Aquandic Dystrudepts-----DRY MEADOW (R009XY019ID)					
		Favorable	2,000	Nevada bluegrass	
		Normal	1,300	Other perennial forbs	
		Unfavorable	800	Alpine timothy	
				Beauty cinquefoil	
				Clover	
				Sedge	
				Slender wheatgrass	
				Streambank wheatgrass	
11: Bandmill, dry---Grand fir/queencup beادلily (CN520)					
		Favorable	400	Other shrubs	
		Normal	200	Longtube twinflower	
		Unfavorable	50	Other perennial forbs	
				Western goldthread	
				American trailplant	
				Blue huckleberry	
				Colombian brome	
				Common snowberry	
				Dwarf rose	
				False Solomon's seal	
				Queencup beادلily	
				Saskatoon serviceberry	
				Thimbleberry	



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
11: Grangemont-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Bargamin-----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50	Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry	
12: Bandmill-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
12: Riswold-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
13: Berthahill, moist-----	Mountain hemlock/queencup beadlily (CN685)	Favorable Normal Unfavorable	700 500 300	Rusty menziesia Common beargrass Blue huckleberry Other perennial forbs Broadleaf arnica Darkwoods violet Other shrubs Queencup beadlily Utah honeysuckle
Handoff-----	Sitka alder/miner's lettuce (CN001)	Favorable Normal Unfavorable	2,000 1,500 1,000	Sitka alder Miner's lettuce Other shrubs Other perennial forbs
14: Berthahill-----	Subalpine fir/queencup beadlily (CN620)	Favorable Normal Unfavorable	600 350 50	Blue huckleberry Common beargrass Other shrubs Rusty menziesia Western goldthread Colombian brome Darkwoods violet False Solomon's seal Other perennial forbs Queencup beadlily Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
14: Handoff-----	Sitka alder/miner's lettuce (CN001)	Favorable Normal Unfavorable	2,000 1,500 1,000	Sitka alder Miner's lettuce Other shrubs Other perennial forbs
15: Berthahill-----	Subalpine fir/queencup beadlily (CN620)	Favorable Normal Unfavorable	600 350 50	Blue huckleberry Common beargrass Other shrubs Rusty menziesia Western goldthread Colombian brome Darkwoods violet False Solomon's seal Other perennial forbs Queencup beadlily Western rattlesnake plan
Shattuck-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
16: Bigtalk, cool---	Western hemlock/queencup beadlily (CN570)	Favorable Normal Unfavorable	300 175 50		Other shrubs Other perennial forbs Longtube twinflower Western goldthread Blue huckleberry Bunchberry dogwood Darkwoods violet False Solomon's seal Myrtle boxwood Oneleaf foamflower Queencup beadlily Western rattlesnake plant
Bigtalk, wet----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgins False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
17: Bigtalk-----	Grand fir/wild ginger (CN516)	Favorable Normal Unfavorable	700 500 300		Other shrubs Other perennial forbs British Columbia wildgins Rocky Mountain maple Rusty menziesia American trailplant Blue huckleberry Colombian brome Common snowberry False Solomon's seal Queencup beadlily Thimbleberry Western goldthread

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
18: Bigtalk, cool---	Western hemlock/queencup beadlily (CN570)	Favorable Normal Unfavorable	300 175 50	Other shrubs Other perennial forbs Longtube twinflower Western goldthread Blue huckleberry Bunchberry dogwood Darkwoods violet False Solomon's seal Myrtle boxwood Oneleaf foamflower Queencup beadlily Western rattlesnake plan	
Floodwood, cool	Western redcedar/maidenhair fern (CN560)	Favorable Normal Unfavorable	800 600 400	Northern maidenhair Other perennial forbs Longtube twinflower Western goldthread American trailplant British Columbia wildgini Bunchberry dogwood False Solomon's seal Hooker's fairybells Oneleaf foamflower Other shrubs Queencup beadlily Western swordfern	
19: Bigtalk, cool---	Western hemlock/queencup beadlily (CN570)	Favorable Normal Unfavorable	300 175 50	Other shrubs Other perennial forbs Longtube twinflower Western goldthread Blue huckleberry Bunchberry dogwood Darkwoods violet False Solomon's seal Myrtle boxwood Oneleaf foamflower Queencup beadlily Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
19:				Lb/acre	
Keeler, cool----	Western hemlock/queencup beadlily (CN570)	Favorable	300		Other shrubs
		Normal	175		Other perennial forbs
		Unfavorable	50		Longtube twinflower
					Western goldthread
					Blue huckleberry
					Bunchberry dogwood
					Darkwoods violet
					False Solomon's seal
					Myrtle boxwood
					Oneleaf foamflower
					Queencup beadlily
					Western rattlesnake plan
20:					
Bouldercreek, moist-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
21:					
Bouldercreek----	Western hemlock/wild ginger (CN575)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Western goldthread
					American trailplant
					British Columbia wildgin
					Colombian brome
					False Solomon's seal
					Hooker's fairybells
					Oneleaf foamflower
					Other perennial grasslik
					Queencup beadlily
					Violet
					Western rattlesnake plan



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
22: Bouldercreek-----	Western hemlock/wild ginger (CN575)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Western goldthread American trailplant British Columbia wildgin Colombian brome False Solomon's seal Hooker's fairybells Longtube twinflower Other perennial grasslik Queencup beadlily Rocky Mountain maple Violet Western rattlesnake plan	
23: Bouldercreek, moist-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle	
Brodeer-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
24: Boulder creek-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plant
Brodeer-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildginger False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
25: Boulder creek-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plant

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
25: Judgetown-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
26: Bouldercreek, high precipitation--	Western hemlock/wild ginger (CN575)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Western goldthread American trailplant British Columbia wildgin Colombian brome False Solomon's seal Hooker's fairybells Longtube twinflower Other perennial grasslik Queencup beadlily Rocky Mountain maple Violet Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
26:					
Marblecreek-----	Grand fir/queencup beadlily (CN520)	Favorable	400	Common snowberry	
		Normal	200	Other shrubs	
		Unfavorable	50	Other perennial forbs	
				American trailplant	
				Colombian brome	
				Dwarf rose	
				False Solomon's seal	
				Longtube twinflower	
				Myrtle boxwood	
				Piper's anemone	
				Queencup beadlily	
				Rocky Mountain maple	
				Saskatoon serviceberry	
				Western goldthread	
				White spirea	
27:					
Bouldercreek,					
cool, dry-----	Western hemlock/queencup beadlily (CN570)	Favorable	300	Other shrubs	
		Normal	175	Other perennial forbs	
		Unfavorable	50	Longtube twinflower	
				Western goldthread	
				Blue huckleberry	
				Bunchberry dogwood	
				Darkwoods violet	
				False Solomon's seal	
				Myrtle boxwood	
				Oneleaf foamflower	
				Queencup beadlily	
				Western rattlesnake plan	
Rettig, cool----	Western hemlock/wild ginger (CN575)	Favorable	300	Other shrubs	
		Normal	200	Other perennial forbs	
		Unfavorable	100	British Columbia wilddgin	
				Longtube twinflower	
				Oneleaf foamflower	
				Western goldthread	
				Dwarf rose	
				Myrtle boxwood	
				Queencup beadlily	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
28: Brequito, dry---	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry
29: Brequito-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
Grangemont-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
30: Brequito-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Lado, dry-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
31: Brequito-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
31: Lado, dry-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
32: Brequito-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Mushel-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
33: Brequito-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Mushel-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
34: Brodeer, dry----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
34: Brodeer-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgins False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
35: Brodeer-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
Mushel-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
36: Brodeer, warm---	Grand fir/queencup beadlily (CN520)			Lb/acre	
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
Mushel, dry-----	Grand fir/queencup beadlily (CN520)				Thimbleberry
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
37: Brodeer-----	Western redcedar/wild ginger (CN545)				Thimbleberry
		Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
37: Bouldercreek-----	Western redcedar/queencup beadlily (CN530)		Lb/acre	
		Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
38: Brodeer-----	Western redcedar/wild ginger (CN545)			
		Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildging
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
Flewsie, dry----	Western redcedar/queencup beadlily (CN530)			Utah honeysuckle
		Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
		Rocky Mountain maple		
		Western goldthread		
		Western rattlesnake plan		

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
39:			Lb/acre	
Brodeer-----	Western redcedar/wild ginger (CN545)	Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgin
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
Lostpete-----	Western redcedar/wild ginger (CN545)	Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgin
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
40:				
Brodeer, moist--	Western redcedar/wild ginger (CN545)	Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgin
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
40: Lostpete, moist	Western redcedar/oakfern (CN555)	Favorable Normal Unfavorable	500 300 150	Western oakfern Other shrubs Other perennial forbs Queencup beadlily Western goldthread Blue huckleberry British Columbia wildgins False Solomon's seal Longtube twinflower Oneleaf foamflower Pacific yew Rocky Mountain maple Rusty menziesia	
41: Brodeer, dry----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plant	
Mushel-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plant	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
42: Brodeer-----	Western redcedar/wild ginger (CN545)		Lb/acre		
		Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgins
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
Mushel-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
43: Burntcreek-----	Grand fir/queencup beadlily (CN520)				Western rattlesnake plant
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
					Thimbleberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
				Lb/acre	
44: Campra-----	Grand fir/queencup beadlily (CN520)				
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
			Thimbleberry		
45: Campra-----	Grand fir/queencup beadlily (CN520)				
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
			Thimbleberry		
Sly-----	Grand fir/queencup beadlily (CN520)				
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
			Thimbleberry		

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
46: Carlinton-----	Grand fir/ninebark (CN506)		Lb/acre		
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
47: Carlinton-----	Grand fir/ninebark (CN506)				
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
48: Carlinton-----	Grand fir/ninebark (CN506)				
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
Kruse-----	Grand fir/ninebark (CN506)				
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	
		Favorable	650	Mallow ninebark	
		Normal	400	Other shrubs	
		Unfavorable	150	Common snowberry	
				Oceanspray	
				Pinegrass	
				Dwarf rose	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
49:				Lb/acre	
Carlinton-----	Grand fir/ninebark (CN506)	Favorable	650		Mallow ninebark
		Normal	400		Other shrubs
		Unfavorable	150		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
Seddow-----	Grand fir/twinflower (CN590)	Favorable	1,800		Longtube twinflower
		Normal	1,100		White spirea
		Unfavorable	300		Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					Mallow ninebark
					Oceanspray
					Oregongrape
					Other shrubs
					Other perennial forbs
					Pinegrass
					Saskatoon serviceberry
					Western goldthread
					Western rattlesnake plan
50:					
Caseycreek-----	Western redcedar/queencup	Favorable	325		Other shrubs
	beadlily (CN530)	Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
51: Cavendish-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	1,200 800 400	Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea	
52: Cavendish-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	1,100 750 400	Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea	
Taney-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	900 650 400	Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea	
53: Cobbler-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150	Mallow ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry	



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
53: Aldermand-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
54: Cobbler-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150	Mallow ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry	
Noil-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150	Mallow ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
55: Cranberry-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
				Lb/acre	
Riswold-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
56: Crumarine-----	DRY MEADOW (R009XY0191D)	Favorable Normal Unfavorable	2,000 1,300 800		Nevada bluegrass Other perennial forbs Alpine timothy Beauty cinquefoil Clover Sedge Slender wheatgrass Streambank wheatgrass
57: Dam-----	---	---	---		---

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
58: Driscoll-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,300 950 600	Lb/acre	Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose
59: Driscoll-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,300 950 600		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose
Larkin-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,200 950 650		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
60: Dullaxe, high elevation-----	Grand fir/wild ginger (CN516)			Lb/acre	
Dullaxe-----	Western redcedar/wild ginger (CN545)				
61: Dullaxe, dry----	Western redcedar/queencup beadlily (CN530)				

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
61: Dullaxe, wet----	Western redcedar/maidenhair fern (CN560)			Lb/acre	
62: Dullaxe-----	Western redcedar/wild ginger (CN545)				
Brodeer-----	Western redcedar/wild ginger (CN545)				

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
63: Dullaxe-----	Western redcedar/wild ginger (CN545)		Lb/acre	
		Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgins
Brodeer-----	Western redcedar/wild ginger (CN545)			False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
		Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
64: Dullaxe-----	Western redcedar/wild ginger (CN545)			Rusty menziesia
				Western goldthread
				British Columbia wildgins
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
Dullaxe-----	Western redcedar/wild ginger (CN545)			Other shrubs
		Favorable	300	Other perennial forbs
		Normal	200	Blue huckleberry
		Unfavorable	100	Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgins
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
		Queencup beadlily		
		Utah honeysuckle		



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
64: Judgetown----- Western redcedar/queencup beadlily (CN530)				Lb/acre	
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
65: Dullaxe----- Western redcedar/wild ginger (CN545)					Western goldthread
					Western rattlesnake plan
		Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
Judgetown, moist Western redcedar/wild ginger (CN545)					Utah honeysuckle
		Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
66: Dullaxe-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
Jury, moist-----	Western redcedar/oakfern (CN555)	Favorable Normal Unfavorable	500 300 150	Western oakfern Other shrubs Other perennial forbs Queencup beadlily Western goldthread Blue huckleberry British Columbia wildgin False Solomon's seal Longtube twinflower Oneleaf foamflower Pacific yew Rocky Mountain maple Rusty menziesia
67: Dumps, wood slash-----	---	---	---	---

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
68: Dworshak-----	Western redcedar/queencup beadlily (CN530)			Lb/acre	
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
69: Dworshak-----	Western redcedar/queencup beadlily (CN530)				Western rattlesnake plan
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
Brequito-----	Western redcedar/queencup beadlily (CN530)				Western rattlesnake plan
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
70: Elkberry-----	Western redcedar/queencup beadlily (CN530)			Lb/acre	
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
Elkberry, wet----	Western redcedar/wild ginger (CN545)				Western rattlesnake plan
		Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
71: Elkberry-----	Western redcedar/queencup beadlily (CN530)				
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
71: Dworshak-----	Western redcedar/queencup beadlily (CN530)			Lb/acre	
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
72: Elkridge-----	Western redcedar/queencup beadlily (CN530)				Western rattlesnake plan
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
Riswold-----	Western redcedar/queencup beadlily (CN530)				Western rattlesnake plan
		Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
73: Elkridge-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Riswold-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
74: Fico, dry-----	Subalpine fir/beargrass (CN690)	Favorable Normal Unfavorable	700 500 300	Blue huckleberry Common beargrass Grouse whortleberry Broadleaf arnica Darkwoods violet Elk sedge Pinegrass Piper's anemone Pipsissewa	



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
74: Hucberit, warm--	Subalpine fir/beargrass (CN690)	Favorable Normal Unfavorable	700 500 300	Blue huckleberry Common beargrass Grouse whortleberry Broadleaf arnica Darkwoods violet Elk sedge Pinegrass Piper's anemone Pipsissewa	
75: Fico-----	Subalpine fir/twistedstalk-menziesia phase (CN636)	Favorable Normal Unfavorable	1,100 800 500	Other perennial forbs Blue huckleberry Other shrubs Rusty menziesia Arrowleaf groundsel Broadleaf arnica Claspleaf twistedstalk Common beargrass False Solomon's seal Oneleaf foamflower Queencup beadlily Western goldthread	
Weitas-----	Sitka alder/miner's lettuce (CN001)	Favorable Normal Unfavorable	2,000 1,500 1,000	Sitka alder Miner's lettuce Other shrubs Other perennial forbs	
76: Flewsie, high precipitation--	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Longtube twinflower Other perennial forbs Rocky Mountain maple Western goldthread Blue huckleberry British Columbia wildgin Darkwoods violet False Solomon's seal Myrtle boxwood Pipsissewa Queencup beadlily Western rattlesnake plan	

Table 5.—Ecological Sites, Plant Associations, and Characteristic Plant Communities—

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegetation
		Kind of year	Dry weight	
77: Flewsie, low precipitation--	Grand fir/queencup beadlily (CN520)		Lb./acre	
		Favorable	400	Other shrubs
		Normal	200	Longtube twinflower
		Unfavorable	50	Other perennial forbs
				Western goldthread
				American trailplant
				Blue huckleberry
Flewsie, dry----	Western redcedar/queencup beadlily (CN530)			Colombian brome
				Common snowberry
				Dwarf rose
				False Solomon's seal
				Queencup beadlily
				Saskatoon serviceberry
				Thimbleberry
		Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Rocky Mountain maple
				Western goldthread
				Western rattlesnake plantain

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta		
		Kind of year	Dry weight			
			Lb/acre			
78: Floodwood-----	Western redcedar/oakfern (CN555)					
		Favorable	500	Other shrubs		
		Normal	300	Other perennial forbs		
		Unfavorable	150	Western oakfern		
				Arrowleaf groundsel		
				British Columbia wildgins		
				Bunchberry dogwood		
				False Solomon's seal		
				Hooker's fairybells		
				Longtube twinflower		
				Northern maidenhair		
				Oneleaf foamflower		
				Other perennial grasses		
				Pipsissewa		
				Queencup beadlily		
				Western goldthread		
		79: Floodwood, warm	Western redcedar/wild ginger (CN545)			
Favorable	300			Other shrubs		
Normal	200			Other perennial forbs		
Unfavorable	100			Blue huckleberry		
				Rocky Mountain maple		
				Rusty menziesia		
				Western goldthread		
				British Columbia wildgins		
				False Solomon's seal		
				Longtube twinflower		
				Myrtle boxwood		
				Queencup beadlily		
				Utah honeysuckle		
Keeler-----	Western redcedar/queencup beadlily (CN530)			Favorable	325	Other shrubs
				Normal	200	Other perennial forbs
				Unfavorable	50	Queencup beadlily
				Bunchberry dogwood		
				Colombian brome		
				Common snowberry		
				Darkwoods violet		
				Dwarf rose		
				False Solomon's seal		
				Longtube twinflower		
				Myrtle boxwood		
				Rocky Mountain maple		
				Western goldthread		
				Western rattlesnake plan		

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry	weight	
80:					
Floodwood-----	Western redcedar/oakfern (CN555)	Favorable			
		Normal		500	Other shrubs
		Unfavorable		300	Other perennial forbs
				150	Western oakfern
					Arrowleaf groundsel
					British Columbia wildgins
					Bunchberry dogwood
					False Solomon's seal
					Hooker's fairybells
					Longtube twinflower
					Northern maidenhair
					Oneleaf foamflower
					Other perennial grasses
					Pipsissewa
					Queencup beadlily
					Western goldthread
Keeler, warm----	Western redcedar/queencup	Favorable		300	Blue huckleberry
	beadlily (CN530)	Normal		175	Common snowberry
		Unfavorable		50	Longtube twinflower
					Other perennial forbs
					Western goldthread
					Colombian brome
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Oneleaf foamflower
					Other shrubs
					Pipsissewa
					Queencup beadlily
					Utah honeysuckle
					Western rattlesnake plantain

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
81: Floodwood-----	Western redcedar/oakfern (CN555)			Lb/acre	
		Favorable	500		Other shrubs
		Normal	300		Other perennial forbs
		Unfavorable	150		Western oakfern
					Arrowleaf groundsel
					British Columbia wildgins
					Bunchberry dogwood
					False Solomon's seal
					Hooker's fairybells
					Longtube twinflower
					Northern maidenhair
					Oneleaf foamflower
					Other perennial grasses
					Pipsissewa
Keeler, warm----	Western redcedar/queencup beadlily (CN530)				Queencup beadlily
					Western goldthread
		Favorable	300		Blue huckleberry
		Normal	175		Common snowberry
		Unfavorable	50		Longtube twinflower
					Other perennial forbs
					Western goldthread
					Colombian brome
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Oneleaf foamflower
					Other shrubs
					Pipsissewa
					Queencup beadlily
					Utah honeysuckle
					Western rattlesnake plantain

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
82: Flumecreek-----	Grand fir/queencup beadlily (CN520)		Lb/acre		
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
83: Flumecreek-----	Grand fir/queencup beadlily (CN520)				Saskatoon serviceberry
					Thimbleberry
		Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
Stepoff-----	Sitka alder/miner's lettuce (CN001)				False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
					Thimbleberry
		Favorable	2,000		Sitka alder
		Normal	1,500		Miner's lettuce
		Unfavorable	1,000		Other shrubs
					Other perennial forbs



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
83: Dworshak, dry---	Grand fir/wild ginger (CN516)	Favorable Normal Unfavorable	700 500 300	Other shrubs Other perennial forbs British Columbia wildgins Rocky Mountain maple Rusty menziesia American trailplant Blue huckleberry Colombian brome Common snowberry False Solomon's seal Queencup beadlily Thimbleberry Western goldthread
84: Fordcreek-----	Ponderosa pine/Idaho fescue (CN140)	Favorable Normal Unfavorable	1,000 800 600	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Other shrubs Other perennial forbs Other perennial grasses Western yarrow
85: Fordcreek-----	Ponderosa pine/Idaho fescue (CN140)	Favorable Normal Unfavorable	1,000 800 600	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Other shrubs Other perennial forbs Other perennial grasses Western yarrow

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
86: Garveson, high precipitation--	Western redcedar/wild ginger (CN545)		Lb/acre	
		Favorable	300	Bunchberry dogwood
		Normal	175	Longtube twinflower
		Unfavorable	50	Other shrubs
				Other perennial forbs
				Western goldthread
				British Columbia wildgdn
				False Solomon's seal
Floodwood-----	Western redcedar/oakfern (CN555)			Myrtle boxwood
				Oneleaf foamflower
				Other perennial grasses
				Pacific trillium
				Pipsissewa
				Queencup beadlily
		Favorable	500	Other shrubs
		Normal	300	Other perennial forbs
		Unfavorable	150	Western oakfern
87: Gramil-----	Grand fir/queencup beadlily (CN520)			Arrowleaf groundsel
				British Columbia wildgdn
				Bunchberry dogwood
				False Solomon's seal
				Hooker's fairybells
				Longtube twinflower
				Northern maidenhair
				Oneleaf foamflower
				Other perennial grasses
				Pipsissewa
				Queencup beadlily
				Western goldthread
		Favorable	400	Other shrubs
		Normal	200	Longtube twinflower
		Unfavorable	50	Other perennial forbs
				Western goldthread
				American trailplant
				Blue huckleberry
				Colombian brome
				Common snowberry
				Dwarf rose
				False Solomon's seal
				Queencup beadlily
				Saskatoon serviceberry
				Thimbleberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
87: Lewhand-----	MEADOW (R009XY018TD)	Favorable	4,500	Other perennial forbs	
		Normal	3,500	Tufted hairgrass	
		Unfavorable	2,500	Nebraska sedge	
				Alpine timothy	
				Baltic rush	
				Other shrubs	
88: Gramil-----	Grand fir/queencup beadlily (CN520)	Favorable	400	Other shrubs	
		Normal	200	Longtube twinflower	
		Unfavorable	50	Other perennial forbs	
				Western goldthread	
				American trailplant	
				Blue huckleberry	
				Colombian brome	
				Common snowberry	
				Dwarf rose	
				False Solomon's seal	
				Queencup beadlily	
				Saskatoon serviceberry	
				Thimbleberry	
Reggear-----	Grand fir/queencup beadlily (CN520)	Favorable	400	Other shrubs	
		Normal	200	Longtube twinflower	
		Unfavorable	50	Other perennial forbs	
				Western goldthread	
				American trailplant	
				Blue huckleberry	
				Colombian brome	
				Common snowberry	
				Dwarf rose	
				False Solomon's seal	
				Queencup beadlily	
				Saskatoon serviceberry	
				Thimbleberry	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
89: Grandad-----	Western redcedar/wild ginger (CN545)		Lb/acre	
		Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgin
90: Grandad, dry----	Western redcedar/queencup beadlily (CN530)			False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
		Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Rocky Mountain maple
				Western goldthread
Grandad-----	Western redcedar/wild ginger (CN545)			Western rattlesnake plan
		Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgin
				False Solomon's seal
		Longtube twinflower		
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle

Table 5.—Ecological Sites, Plant Associations, and Characteristic Plant Communities—

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
91:					
Grandad, dry----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
Grandad-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
92:					
Grandad-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
92:					
Rettig-----	Western redcedar/wild ginger (CN545)	Favorable	300	Other shrubs	
		Normal	200	Other perennial forbs	
		Unfavorable	100	Blue huckleberry	
				Rocky Mountain maple	
				Rusty menziesia	
				Western goldthread	
				British Columbia wildgin	
				False Solomon's seal	
				Longtube twinflower	
				Myrtle boxwood	
				Queencup beadlily	
				Utah honeysuckle	
93:					
Grandad, wet----	Western redcedar/maidenhair fern (CN560)	Favorable	800	Northern maidenhair	
		Normal	600	Other perennial forbs	
		Unfavorable	400	Longtube twinflower	
				Western goldthread	
				American trailplant	
				British Columbia wildgin	
				Bunchberry dogwood	
				False Solomon's seal	
				Hooker's fairybells	
				Oneleaf foamflower	
				Other shrubs	
				Queencup beadlily	
				Western swordfern	
Rettig, wet-----	Western redcedar/maidenhair fern (CN560)	Favorable	800	Northern maidenhair	
		Normal	600	Other perennial forbs	
		Unfavorable	400	Longtube twinflower	
				Western goldthread	
				American trailplant	
				British Columbia wildgin	
				Bunchberry dogwood	
				False Solomon's seal	
				Hooker's fairybells	
				Oneleaf foamflower	
				Other shrubs	
				Queencup beadlily	
				Western swordfern	



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
94:				Lb/acre	
Grandad, dry----	Western redcedar/queencup beadlily (CN530)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgins
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
Scand-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
95:					
Grangemont-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
95: Kauder-----	Western redcedar/queencup beadlily (CN530)			
		Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
96: Grangemont, dry	Grand fir/queencup beadlily (CN520)			
		Favorable	400	Other shrubs
		Normal	200	Longtube twinflower
		Unfavorable	50	Other perennial forbs
				Western goldthread
				American trailplant
				Blue huckleberry
				Colombian brome
				Common snowberry
				Dwarf rose
				False Solomon's seal
Kauder, dry-----	Grand fir/queencup beadlily (CN520)			
		Favorable	400	Other shrubs
		Normal	200	Longtube twinflower
		Unfavorable	50	Other perennial forbs
				Western goldthread
				American trailplant
				Blue huckleberry
				Colombian brome
				Common snowberry
				Dwarf rose
				False Solomon's seal
		Queencup beadlily		
		Saskatoon serviceberry		
		Thimbleberry		

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
97:				Lb/acre	
Grangemont-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgins
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
Kauder, moist----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgins
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
98:					
Grangemont, wet	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgins
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry	weight	
98:					
Riswold-----	Western redcedar/queencup	Favorable		325	Other shrubs
	beadlily (CN530)	Normal		200	Other perennial forbs
		Unfavorable		50	Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
99:					
Grasshopper-----	MEADOW (R009XY018ID)	Favorable		4,500	Other perennial forbs
		Normal		3,500	Tufted hairgrass
		Unfavorable		2,500	Nebraska sedge
					Alpine timothy
					Baltic rush
					Other shrubs
100:					
Gwin-----	SHALLOW SOUTH SLOPE STONY 16-22	Favorable		850	Bluebunch wheatgrass
	PSSPS-POSE (R009XY026ID)	Normal		650	Sandberg bluegrass
		Unfavorable		400	Arrowleaf balsamroot
					Bent milkvetch
					Cous biscuitroot
					Narrowleaf skullcap
					Other perennial forbs
					Penstemon
					Silky lupine
					Wyeth buckwheat
Kettenbach-----	SOUTH SLOPE LOAMY 16-22	Favorable		1,000	Bluebunch wheatgrass
	PSSPS-FEID (R009XY004ID)	Normal		800	Arrowleaf balsamroot
		Unfavorable		600	Arrowleaf skullcap
					Nineleaf biscuitroot
					Other perennial forbs
					Palouse milkvetch
					Sandberg bluegrass
					Silky lupine

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
101: Gwin-----	SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE (R009XY0261D)		Lb/acre	
		Favorable	850	Bluebunch wheatgrass
		Normal	650	Sandberg bluegrass
		Unfavorable	400	Arrowleaf balsamroot
				Bent milkvetch
				Cous biscuitroot
				Narrowleaf skullcap
				Other perennial forbs
Kettenbach-----	SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY0041D)			Penstemon
				Silky lupine
				Wyeth buckwheat
		Favorable	1,000	Bluebunch wheatgrass
		Normal	800	Arrowleaf balsamroot
		Unfavorable	600	Narrowleaf skullcap
				Nineleaf biscuitroot
				Other perennial forbs
				Palouse milkvetch
Keuterville-----	Ponderosa pine/common snowberry (CN170)			Sandberg bluegrass
				Silky lupine
		Favorable	1,500	Common snowberry
		Normal	1,000	Bluebunch wheatgrass
		Unfavorable	500	Other shrubs
				Other perennial grasses
				White spirea
				Arrowleaf balsamroot
				Creeping Oregonrape
				Elk sedge
				Other perennial forbs
				Pinegrass
				Saskatoon serviceberry
				Woods' rose

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
102:				Lb/acre	
Hildebrand-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
Spacecreek, dry	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
103:					
Hubub, wet-----	Western redcedar/maidenhair fern (CN560)	Favorable	800		Northern maidenhair
		Normal	600		Other perennial forbs
		Unfavorable	400		Longtube twinflower
					Western goldthread
					American trailplant
					British Columbia wildgins
					Bunchberry dogwood
					False Solomon's seal
					Hooker's fairybells
					Oneleaf foamflower
					Other shrubs
					Queencup beadlily
					Western swordfern



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
104: Hubub, wet-----	Western redcedar/maidenhair fern (CN560)	Favorable Normal Unfavorable	800 600 400	Northern maidenhair Other perennial forbs Longtube twinflower Western goldthread American trailplant British Columbia wildgin Bunchberry dogwood False Solomon's seal Hooker's fairybells Oneleaf foamflower Other shrubs Queencup beadlily Western swordfern
				Lb/acre
Dworshak-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
105: Hubub-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
105: Lostpete-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgins False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
106: Hucberit-----	Mountain hemlock/queencup beadlily (CN685)	Favorable Normal Unfavorable	700 500 300		Rusty menziesia Common beargrass Blue huckleberry Other perennial forbs Broadleaf arnica Darkwoods violet Other shrubs Queencup beadlily Utah honeysuckle
107: Hucberit-----	Mountain hemlock/queencup beadlily (CN685)	Favorable Normal Unfavorable	700 500 300		Rusty menziesia Common beargrass Blue huckleberry Other perennial forbs Broadleaf arnica Darkwoods violet Other shrubs Queencup beadlily Utah honeysuckle
Vaywood, high precipitation--	Mountain hemlock/queencup beadlily (CN685)	Favorable Normal Unfavorable	700 500 300		Rusty menziesia Common beargrass Blue huckleberry Other perennial forbs Broadleaf arnica Darkwoods violet Other shrubs Queencup beadlily Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
108: Hugus-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
109: Hugus-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
110: Hugus, moist----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
111: Hugus, high precipitation--	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Myrtle boxwood Other perennial forbs Utah honeysuckle Western goldthread American trailplant British Columbia wildgin Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Oregon drops of gold Queencup beadlily Western rattlesnake plan	
112: Hugus, moist----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle	
Hugus-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
113:				Lb/acre	
Hugus-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
Dworshak-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
114:					
Itzee-----	Ponderosa pine/Idaho fescue (CN140)	Favorable	1,000		Idaho fescue
		Normal	800		Bluebunch wheatgrass
		Unfavorable	600		Arrowleaf balsamroot
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Western yarrow

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
115: Jacket-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,500 1,000 500		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose
116: Jacket-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,300 950 600		Common snowberry Pinegrass Saskatoon serviceberry Arrowleaf balsamroot Bluebunch wheatgrass Columbia brome Elk sedge Idaho fescue Low Oregongrape Other shrubs Other perennial forbs White spirea Woodland strawberry Woods' rose
117: Jacket-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,500 1,000 500		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
117: Wellsbench----- LOAMY 16-22 FEID-PSSPS (R009XY003ID)			Lb/acre	
		Favorable	1,800	Idaho fescue
		Normal	1,500	Bluebunch wheatgrass
		Unfavorable	1,200	Arrowleaf balsamroot
				Common yarrow
				Indian paintbrush
				Northwest cinquefoil
				Prairie Junegrass
				Prairiesmoke
				Silky lupine
118: Jacot----- Western hemlock/queencup beadlily (CN570)				
		Favorable	300	Longtube twinflower
		Normal	175	Myrtle boxwood
		Unfavorable	50	Other shrubs
				Other perennial forbs
				Western goldthread
				Blue huckleberry
				Bunchberry dogwood
				Common snowberry
				Darkwoods violet
Garveson----- Western hemlock/queencup beadlily (CN570)				
		Favorable	300	Longtube twinflower
		Normal	175	Myrtle boxwood
		Unfavorable	50	Other shrubs
				Other perennial forbs
				Western goldthread
				Blue huckleberry
				Bunchberry dogwood
				Common snowberry
				Darkwoods violet

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
119:				Lb/acre	
Jacot-----	Western hemlock/queencup				
	beadlily (CN570)	Favorable	300		Longtube twinflower
		Normal	175		Myrtle boxwood
		Unfavorable	50		Other shrubs
					Other perennial forbs
					Western goldthread
					Blue huckleberry
					Bunchberry dogwood
					Common snowberry
					Darkwoods violet
					False Solomon's seal
					Oneleaf foamflower
					Pipsissewa
					Queencup beadlily
					Shinyleaf spirea
					Western rattlesnake plan
Garveson-----	Western hemlock/queencup				
	beadlily (CN570)	Favorable	300		Longtube twinflower
		Normal	175		Myrtle boxwood
		Unfavorable	50		Other shrubs
					Other perennial forbs
					Western goldthread
					Blue huckleberry
					Bunchberry dogwood
					Common snowberry
					Darkwoods violet
					False Solomon's seal
					Oneleaf foamflower
					Pipsissewa
					Queencup beadlily
					Shinyleaf spirea
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
120: Jaype-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Revlng-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wilgdn False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle	
121: Jaype, dry-----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50	Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
121: Revsling, dry----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry
122: Jaype-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
Statemeadow-----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
123: Joel-----	Douglas-fir/ninebark (CN260)	Favorable Normal Unfavorable	1,600 1,200 800	Mallow ninebark Common snowberry Elk sedge Oceanspray Pinegrass Heartleaf arnica Other shrubs Other perennial forbs Other perennial grasses Saskatoon serviceberry White spirea	
Setters-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	1,200 800 400	Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea	
124: Johnson-----	Douglas-fir/ninebark (CN260)	Favorable Normal Unfavorable	1,100 900 600	Mallow ninebark Common snowberry Elk sedge Oceanspray Pinegrass Heartleaf arnica Other shrubs Other perennial forbs Other perennial grasses Saskatoon serviceberry White spirea	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
125:				Lb/acre	
Johnson-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
Swayne-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
126:					
Johnson-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
126:				Lb/acre	
Swayne-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
127:					
Johnson-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
Texascreek-----	Douglas-fir/common snowberry (CN310)	Favorable	1,200		Common snowberry
		Normal	800		Elk sedge
		Unfavorable	400		Other perennial forbs
					Bluebunch wheatgrass
					Heartleaf arnica
					Other shrubs
					Other perennial grasses
					Pinegrass
					Saskatoon serviceberry
					White spirea

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
128: Jury-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgins False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beaslily Utah honeysuckle	
129: Jury-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgins False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beaslily Utah honeysuckle	
130: Jury, cold-----	Grand fir/wild ginger (CN516)	Favorable Normal Unfavorable	700 500 300	Other shrubs Other perennial forbs British Columbia wildgins Rocky Mountain maple Rusty menziesia American trailplant Blue huckleberry Colombian brome Common snowberry False Solomon's seal Queencup beaslily Thimbleberry Western goldthread	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
131: Jury-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildginn False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
Weitas-----	Sitka alder/miner's lettuce (CN001)	Favorable Normal Unfavorable	2,000 1,500 1,000		Sitka alder Miner's lettuce Other shrubs Other perennial forbs
132: Jury-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildginn False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
Weitas-----	Sitka alder/miner's lettuce (CN001)	Favorable Normal Unfavorable	2,000 1,500 1,000		Sitka alder Miner's lettuce Other shrubs Other perennial forbs

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
133:				Lb/acre	
Kauder-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
134:					
Keeler, dry-----	Grand fir/queencup beadlily (CN520)	Favorable	400		Other shrubs
		Normal	200		Longtube twinflower
		Unfavorable	50		Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
					Thimbleberry
Keeler-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
135:				Lb/acre	
Keeler, moist---	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildging
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
Keeler-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
136:					
Keeler-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry	weight	
136:					
Aldermand-----	Western redcedar/queencup	Favorable	325		Other shrubs
	beadlily (CN530)	Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
137:					
Keeler-----	Western hemlock/queencup	Favorable	300		Longtube twinflower
	beadlily (CN570)	Normal	175		Myrtle boxwood
		Unfavorable	50		Other shrubs
					Other perennial forbs
					Western goldthread
					Blue huckleberry
					Bunchberry dogwood
					Common snowberry
					Darkwoods violet
					False Solomon's seal
					Oneleaf foamflower
					Pipsissewa
					Queencup beadlily
					Shinyleaf spirea
					Western rattlesnake plan



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
137: Jacot-----	Western hemlock/queencup beadlily (CN570)		Lb/acre	
		Favorable	300	Longtube twinflower
		Normal	175	Myrtle boxwood
		Unfavorable	50	Other shrubs
				Other perennial forbs
				Western goldthread
				Blue huckleberry
				Bunchberry dogwood
				Common snowberry
				Darkwoods violet
				False Solomon's seal
138: Keeler-----	Western redcedar/queencup beadlily (CN530)			Oneleaf foamflower
				Pipsissewa
				Queencup beadlily
				Shinyleaf spirea
				Western rattlesnake plant
		Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
		Darkwoods violet		
		Dwarf rose		
		False Solomon's seal		
		Longtube twinflower		
		Myrtle boxwood		
		Rocky Mountain maple		
		Western goldthread		
		Western rattlesnake plant		
Lado-----	Western redcedar/wild ginger (CN545)			
		Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgins
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
139: Kettenbach-----	SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)		Lb/acre		
		Favorable	1,000	Bluebunch wheatgrass	
		Normal	800	Arrowleaf balsamroot	
		Unfavorable	600	Narrowleaf skullcap	
				Nineleaf biscuitroot	
				Other perennial forbs	
				Palouse milkvetch	
				Sandberg bluegrass	
				Silky lupine	
Gwin-----	SHALLOW SOUTH SLOPE STONY 16-22 PSSPS-POSE (R009XY026ID)	Favorable	850	Bluebunch wheatgrass	
		Normal	650	Sandberg bluegrass	
		Unfavorable	400	Arrowleaf balsamroot	
				Bent milkvetch	
				Cous biscuitroot	
				Narrowleaf skullcap	
				Other perennial forbs	
				Penstemon	
				Silky lupine	
				Wyeth buckwheat	
140: Kettenbach-----	SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)		---	---	
		Favorable	1,000	Bluebunch wheatgrass	
		Normal	800	Arrowleaf balsamroot	
		Unfavorable	600	Narrowleaf skullcap	
				Nineleaf biscuitroot	
				Other perennial forbs	
				Palouse milkvetch	
				Sandberg bluegrass	
				Silky lupine	
Keuterville-----	Ponderosa pine/common snowberry (CN170)	Favorable	1,300	Common snowberry	
		Normal	950	Bluebunch wheatgrass	
		Unfavorable	600	Other shrubs	
				Other perennial grasses	
				White spirea	
				Arrowleaf balsamroot	
				Creeping Oregonrape	
				Elk sedge	
				Other perennial forbs	
				Pinegrass	
		Saskatoon serviceberry			
		Woods' rose			

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
141: Keuterville-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,300 950 600		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose
142: Keuterville-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,500 1,000 500		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose
143: Keuterville-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,300 950 600		Common snowberry Pinegrass Saskatoon serviceberry Arrowleaf balsamroot Bluebunch wheatgrass Elk sedge Idaho fescue Other perennial forbs Rose White spirea Woodland strawberry
Rock outcrop-----	---	---	---		---

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
144: Klickson-----	Douglas-fir/ninebark (CN260)	Favorable	1,400	Mallow ninebark	
		Normal	1,050	Common snowberry	
		Unfavorable	750	Elk sedge	
				Oceanspray	
				Pinegrass	
				Heartleaf arnica	
				Other shrubs	
				Other perennial forbs	
				Other perennial grasses	
				Saskatoon serviceberry	
				White spirea	
145: Klickson-----	Douglas-fir/ninebark (CN260)	Favorable	1,400	Mallow ninebark	
		Normal	1,050	Common snowberry	
		Unfavorable	750	Elk sedge	
				Oceanspray	
				Pinegrass	
				Heartleaf arnica	
				Other shrubs	
				Other perennial forbs	
				Other perennial grasses	
				Saskatoon serviceberry	
				White spirea	
146: Klickson-----	Douglas-fir/ninebark (CN260)	Favorable	1,400	Mallow ninebark	
		Normal	1,050	Common snowberry	
		Unfavorable	750	Elk sedge	
				Oceanspray	
				Pinegrass	
				Heartleaf arnica	
				Other shrubs	
				Other perennial forbs	
				Other perennial grasses	
				Saskatoon serviceberry	
				White spirea	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
146:				Lb/acre	
Agatha-----	Grand fir/ninebark (CN506)	Favorable	500		Mallow ninebark
		Normal	350		Other shrubs
		Unfavorable	200		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
147:					
Klickson-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
Kettenbach-----	SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)	Favorable	1,000		Bluebunch wheatgrass
		Normal	800		Arrowleaf balsamroot
		Unfavorable	600		Narrowleaf skullcap
					Nineleaf biscuitroot
					Other perennial forbs
					Palouse milkvetch
					Sandberg bluegrass
					Silky lupine
148:					
Klickson-----	Douglas-fir/ninebark (CN260)	Favorable	1,400		Mallow ninebark
		Normal	1,050		Common snowberry
		Unfavorable	750		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
148: Rock outcrop----	---	---	---	Lb/acre	
Kettenbach-----	SOUTH SLOPE LOAMY 16-22 PSSPS-FEID (R009XY004ID)	Favorable Normal Unfavorable	1,000 800 600		Bluebunch wheatgrass Arrowleaf balsamroot Narrowleaf skullcap Nineleaf biscuitroot Other perennial forbs Palouse milkvetch Sandberg bluegrass Silky lupine
149: Konkol-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plant
Revling-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildginger False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
150:				Lb/acre	
Kooskia-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
151:					
Kooskia-----	Douglas-fir/ninebark (CN260)	Favorable	1,600		Mallow ninebark
		Normal	1,200		Common snowberry
		Unfavorable	800		Elk sedge
					Oceanspray
					Pinegrass
					Heartleaf arnica
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Saskatoon serviceberry
					White spirea
152:					
Kruse-----	Grand fir/ninebark (CN506)	Favorable	600		Common snowberry
		Normal	400		Longtube twinflower
		Unfavorable	250		Baldhip rose
					Columbia brome
					Elk sedge
					Idaho goldthread
					Other shrubs
					Other perennial forbs
					Pinegrass
					Piper's anemone
					Prince's pine
					Saskatoon serviceberry
					Sweetcicely
					Western rattlesnake plant
					White spirea

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
153: Kruse-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150	Mallo ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry	
154: Kruse-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150	Mallo ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry	
Aldermand-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
155:				Lb/acre	
Kruse-----	Grand fir/ninebark (CN506)	Favorable	650		Mallow ninebark
		Normal	400		Other shrubs
		Unfavorable	150		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
Aldermand-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plantain
156:					
Kruse-----	Grand fir/ninebark (CN506)	Favorable	650		Mallow ninebark
		Normal	400		Other shrubs
		Unfavorable	150		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
156:				
McCrosket, dry--	Douglas-fir/ninebark (CN260)	Favorable	1,600	Mallow ninebark
		Normal	1,200	Common snowberry
		Unfavorable	800	Elk sedge
				Oceanspray
				Pinegrass
				Heartleaf arnica
				Other shrubs
				Other perennial forbs
				Other perennial grasses
				Saskatoon serviceberry
				White spirea
157:				
Kruse-----	Grand fir/ninebark (CN506)	Favorable	650	Mallow ninebark
		Normal	400	Other shrubs
		Unfavorable	150	Common snowberry
				Oceanspray
				Pinegrass
				Dwarf rose
				Other perennial forbs
				Rocky Mountain maple
				Saskatoon serviceberry
				Woodland strawberry
Noil-----	Grand fir/ninebark (CN506)	Favorable	650	Mallow ninebark
		Normal	400	Other shrubs
		Unfavorable	150	Common snowberry
				Oceanspray
				Pinegrass
				Dwarf rose
				Other perennial forbs
				Rocky Mountain maple
				Saskatoon serviceberry
				Woodland strawberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
158:				Lb/acre	
Kruse-----	Grand fir/ninebark (CN506)	Favorable	650		Mallow ninebark
		Normal	400		Other shrubs
		Unfavorable	150		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
Teakean-----	Grand fir/ninebark (CN506)	Favorable	650		Mallow ninebark
		Normal	400		Other shrubs
		Unfavorable	150		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
159:					
Larkin-----	Ponderosa pine/common snowberry (CN170)	Favorable	1,500		Common snowberry
		Normal	1,000		Bluebunch wheatgrass
		Unfavorable	500		Other shrubs
					Other perennial grasses
					White spirea
					Arrowleaf balsamroot
					Creeping Oregongrape
					Elk sedge
					Other perennial forbs
					Pinegrass
					Saskatoon serviceberry
					Woods' rose

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
159: Driscoll-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,500 1,000 500	Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose
160: Lebaron-----	MEADOW (R009XY018ID)	Favorable Normal Unfavorable	4,500 3,500 2,500	Other perennial forbs Tufted hairgrass Nebraska sedge Alpine timothy Baltic rush Other shrubs
Latahco-----	DRY MEADOW (R009XY019ID)	Favorable Normal Unfavorable	2,000 1,300 800	Nevada bluegrass Other perennial forbs Alpine timothy Beauty cinquefoil Clover Sedge Slender wheatgrass Streambank wheatgrass
161: Lewhand-----	MEADOW (R009XY018ID)	Favorable Normal Unfavorable	4,500 3,500 2,500	Other perennial forbs Tufted hairgrass Nebraska sedge Alpine timothy Baltic rush Other shrubs



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
161:			Lb/acre	
Burntcreek-----	Grand fir/queencup beadlily (CN520)	Favorable		
		Normal	400	Other shrubs
		Unfavorable	200	Longtube twinflower
			50	Other perennial forbs
				Western goldthread
				American trailplant
				Blue huckleberry
				Colombian brome
				Common snowberry
				Dwarf rose
				False Solomon's seal
				Queencup beadlily
				Saskatoon serviceberry
				Thimbleberry
162:				
Lewhand-----	MEADOW (R009XY018ID)	Favorable	4,500	Other perennial forbs
		Normal	3,500	Tufted hairgrass
		Unfavorable	2,500	Nebraska sedge
				Alpine timothy
				Baltic rush
				Other shrubs
Teneb-----	MEADOW (R009XY018ID)	Favorable	4,500	Other perennial forbs
		Normal	3,500	Tufted hairgrass
		Unfavorable	2,500	Nebraska sedge
				Alpine timothy
				Baltic rush
				Other shrubs
163:				
Longbar-----	Grand Fir Mosaic (FJ001)	Favorable	1,800	Western brackenfern
		Normal	1,100	Snow raspberry
		Unfavorable	300	Common St. Johnswort
				Montana golden pea
				Other perennial forbs
				American trailplant
				Canadian wildginger
				Mallow ninebark
				Oceanspray
				Other shrubs
				Western hawkweed
				White spirea

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
163:				Lb/acre	
Bigtalk-----	Grand fir/wild ginger (CN516)	Favorable	700		Other shrubs
		Normal	500		Other perennial forbs
		Unfavorable	300		British Columbia wildgins
					Rocky Mountain maple
					Rusty menziesia
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					False Solomon's seal
					Queencup beadlily
					Thimbleberry
					Western goldthread
164:					
Longbar-----	Grand Fir Mosaic (FJ001)	Favorable	1,800		Western brackenfern
		Normal	1,100		Snow raspberry
		Unfavorable	300		Common St. Johnswort
					Montana golden pea
					Other perennial forbs
					American trailplant
					Canadian wildginger
					Mallow ninebark
					Oceanspray
					Other shrubs
					Western hawkweed
					White spirea
Bigtalk-----	Grand fir/wild ginger (CN516)	Favorable	700		Other shrubs
		Normal	500		Other perennial forbs
		Unfavorable	300		British Columbia wildgins
					Rocky Mountain maple
					Rusty menziesia
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					False Solomon's seal
					Queencup beadlily
					Thimbleberry
					Western goldthread

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
165:				Lb/acre	
Longpen-----	Grand fir/ninebark (CN506)	Favorable	650		Mallow ninebark
		Normal	400		Other shrubs
		Unfavorable	150		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
166:					
Longpen-----	Grand fir/ninebark (CN506)	Favorable	650		Mallow ninebark
		Normal	400		Other shrubs
		Unfavorable	150		Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
167:					
Meland-----	LOAMY 16-22 FEID-PSSPS (R009XY003ID)	Favorable	1,800		Idaho fescue
		Normal	1,500		Bluebunch wheatgrass
		Unfavorable	1,200		Arrowleaf balsamroot
					Common yarrow
					Indian paintbrush
					Northwest cinquefoil
					Prairie Junegrass
					Prairiesmoke
					Silky lupine

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
167: Jacket-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,300 950 600	Common snowberry Pinegrass Saskatoon serviceberry Arrowleaf balsamroot Bluebunch wheatgrass Columbia brome Elk sedge Idaho fescue Low Oregongrape Other shrubs Other perennial forbs White spirea Woodland strawberry Woods' rose	
168: Meland-----	LOAMY 16-22 FEID-PSSPS (R009XY003ID)	Favorable Normal Unfavorable	1,800 1,500 1,200	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Common yarrow Indian paintbrush Northwest cinquefoil Prairie Junegrass Prairiesmoke Silky lupine	
Keuterville-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,300 950 600	Common snowberry Pinegrass Saskatoon serviceberry Arrowleaf balsamroot Bluebunch wheatgrass Elk sedge Idaho fescue Other perennial forbs Rose White spirea Woodland strawberry	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
169: Mushel-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
				Lb/acre	
Brodeer-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
170: Mushel-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
170:				Lb/acre	
Dullaxe-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
171:					
Nakarna, high					
precipitation--	Western redcedar/wild ginger (CN545)	Favorable	300		Longtube twinflower
		Normal	200		Other perennial forbs
		Unfavorable	100		Rocky Mountain maple
					Western goldthread
					Blue huckleberry
					British Columbia wildgin
					Colombian brome
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Pipsissewa
					Queencup beadlily
					Utah honeysuckle
					Western rattlesnake plan



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
172: Nakarna, high precipitation--	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Longtube twinflower Other perennial forbs Rocky Mountain maple Western goldthread Blue huckleberry British Columbia wildgins Colombian brome Darkwoods violet Dwarf rose False Solomon's seal Pipsissewa Queencup beadlily Utah honeysuckle Western rattlesnake plan
173: Nakarna-----	Western hemlock/queencup beadlily (CN570)	Favorable Normal Unfavorable	300 175 50	Longtube twinflower Myrtle boxwood Other shrubs Other perennial forbs Western goldthread Blue huckleberry Bunchberry dogwood Common snowberry Darkwoods violet False Solomon's seal Oneleaf foamflower Pipsissewa Queencup beadlily Shinyleaf spirea Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
173: Nakarna, warm---	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Blue huckleberry Longtube twinflower Other perennial forbs Western goldthread Colombian brome Darkwoods violet Dwarf rose False Solomon's seal Oneleaf foamflower Pipsissewa Queencup beadlily Rocky Mountain maple Utah honeysuckle Western rattlesnake plant
174: Narnett-----	Subalpine fir/queencup beadlily (CN620)	Favorable Normal Unfavorable	600 350 50		Blue huckleberry Common beargrass Other shrubs Rusty menziesia Western goldthread Colombian brome Darkwoods violet False Solomon's seal Other perennial forbs Queencup beadlily Western rattlesnake plant
Jury-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100		Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildginger False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
175: Neva-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150		Mallow ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry
176: Newlig-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,500 1,000 500		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose
177: Noil-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150		Mallow ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
				Lb/acre	
177:					
Keeler-----	Western redcedar/queencup beadlily (CN530)	Favorable		325	Other shrubs
		Normal		200	Other perennial forbs
		Unfavorable		50	Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
178:					
Noil-----	Grand fir/ninebark (CN506)	Favorable		650	Mallow ninebark
		Normal		400	Other shrubs
		Unfavorable		150	Common snowberry
					Oceanspray
					Pinegrass
					Dwarf rose
					Other perennial forbs
					Rocky Mountain maple
					Saskatoon serviceberry
					Woodland strawberry
Bouldercreek, warm-----					
	Grand fir/queencup beadlily (CN520)	Favorable		400	Other shrubs
		Normal		200	Longtube twinflower
		Unfavorable		50	Other perennial forbs
					Western goldthread
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					Dwarf rose
					False Solomon's seal
					Queencup beadlily
					Saskatoon serviceberry
					Thimbleberry
Rock outcrop----	---	---		---	---

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
179:				Lb/acre	
Norwidge, moist	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgins
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
Threebear, moist	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgins
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
180:					
Odonnell-----	Western redcedar/maidenhair fern (CN560)	Favorable	800		Northern maidenhair
		Normal	600		Other perennial forbs
		Unfavorable	400		Longtube twinflower
					Western goldthread
					American trailplant
					British Columbia wildgins
					Bunchberry dogwood
					False Solomon's seal
					Hooker's fairybells
					Oneleaf foamflower
					Other shrubs
					Queencup beadlily
					Western swordfern

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
180:				Lb/acre	
Grandad-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildging
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
181:					
Odonnell-----	Western redcedar/ladyfern (CN540)	Favorable	800		Other shrubs
		Normal	600		Other perennial forbs
		Unfavorable	400		Common ladyfern
					Western oakfern
					American trailplant
					British Columbia wildging
					False Solomon's seal
					Hooker's fairybells
					Longtube twinflower
					Oneleaf foamflower
					Other perennial grasslik
					Piper's anemone
					Queencup beadlily
					Sweetscented bedstraw
182:					
Oxyaquic					
Xerofluvents,					
occasionally					
flooded-----	DRY MEADOW (R009XY019ID)				
		Favorable	2,000		Nevada bluegrass
		Normal	1,300		Other perennial forbs
		Unfavorable	800		Alpine timothy
					Beauty cinquefoil
					Clover
					Sedge
					Slender wheatgrass
					Streambank wheatgrass



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
182: Itzee-----	Ponderosa pine/Idaho fescue (CN140)	Favorable Normal Unfavorable	1,000 800 600	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Other shrubs Other perennial forbs Other perennial grasses Western yarrow	
183: Pits, quarry----	---	---	---	---	
184: Placer-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Dowper-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
184: Grangemont-----	Western redcedar/queencup beadlily (CN530)			Lb/acre	
		Favorable		325	Other shrubs
		Normal		200	Other perennial forbs
		Unfavorable		50	Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
185: Poorman, dry----	Grand fir/queencup beadlily (CN520)				Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
186: Poorman, dry----	Grand fir/queencup beadlily (CN520)				

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
186:				Lb/acre	
Poorman-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
187:					
Poorman-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
Grandad-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildginger
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
188:				Lb/acre	
Poorman-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
Grandad-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildginger
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
189:					
Poorman-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
189: Grandad, dry----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
190: Poorman-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
Grandad, dry----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
191: Reggear-----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry
Kauder-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
192: Reggear-----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
192: Seddow-----	Grand fir/twinflower (CN590)	Favorable Normal Unfavorable	1,800 1,100 300	Longtube twinflower White spirea Blue huckleberry Colombian brome Common snowberry Dwarf rose Mallow ninebark Oceanspray Oregongrape Other shrubs Other perennial forbs Pinegrass Saskatoon serviceberry Western goldthread Western rattlesnake plan	
193: Rettig, high elevation-----	Grand fir/wild ginger (CN516)	Favorable Normal Unfavorable	700 500 300	Other shrubs Other perennial forbs British Columbia wilddgn Rocky Mountain maple Rusty menziesia American trailplant Blue huckleberry Colombian brome Common snowberry False Solomon's seal Queencup beادلily Thimbleberry Western goldthread	
194: Rettig-----	Western hemlock/wild ginger (CN575)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs British Columbia wilddgn Longtube twinflower Oneleaf foamflower Western goldthread Dwarf rose Myrtle boxwood Queencup beادلily	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
195:				Lb/acre	
Rettig, cold----	Grand fir/wild ginger (CN516)	Favorable	700		Other shrubs
		Normal	500		Other perennial forbs
		Unfavorable	300		British Columbia wildgdn
					Rocky Mountain maple
					Rusty menziesia
					American trailplant
					Blue huckleberry
					Colombian brome
					Common snowberry
					False Solomon's seal
					Queencup beadlily
					Thimbleberry
					Western goldthread
196:					
Rettig, cool----	Western hemlock/wild ginger (CN575)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		British Columbia wildgdn
					Longtube twinflower
					Oneleaf foamflower
					Western goldthread
					Dwarf rose
					Myrtle boxwood
					Queencup beadlily
Rettig, dry-----	Western hemlock/queencup beadlily (CN570)	Favorable	300		Other shrubs
		Normal	175		Other perennial forbs
		Unfavorable	50		Longtube twinflower
					Western goldthread
					Blue huckleberry
					Bunchberry dogwood
					Darkwoods violet
					False Solomon's seal
					Myrtle boxwood
					Oneleaf foamflower
					Queencup beadlily
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
			Lb/acre	
197:				
Rettig-----	Western redcedar/wild ginger (CN545)	Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgin
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
Grandad-----	Western redcedar/wild ginger (CN545)	Favorable	300	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	100	Blue huckleberry
				Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wildgin
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
198:				
Rettig, warm,				
dry-----	Western redcedar/queencup beadlily (CN530)	Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Rocky Mountain maple
				Western goldthread
				Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
198:				Lb/acre	
Township-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plant
199:					
Rettig-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildging
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
Township, wet----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildging
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
199:			Lb/acre	
Stepoff-----	Sitka alder/miner's lettuce (CN001)	Favorable	2,000	Sitka alder
		Normal	1,500	Miner's lettuce
		Unfavorable	1,000	Other shrubs
				Other perennial forbs
200:				
Riswold-----	Western redcedar/queencup beadlily (CN530)	Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Rocky Mountain maple
				Western goldthread
				Western rattlesnake plan
Cranberry-----	Western redcedar/queencup beadlily (CN530)	Favorable	325	Other shrubs
		Normal	200	Other perennial forbs
		Unfavorable	50	Queencup beadlily
				Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Rocky Mountain maple
				Western goldthread
				Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-						
Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta	
		Kind of year	Dry weight			
201:				Lb/acre		
Riswold-----	Western redcedar/queencup	Favorable	325		Other shrubs	
	beadlily (CN530)	Normal	200		Other perennial forbs	
		Unfavorable	50		Queencup beadlily	
					Bunchberry dogwood	
					Colombian brome	
					Common snowberry	
					Darkwoods violet	
					Dwarf rose	
					False Solomon's seal	
					Longtube twinflower	
					Myrtle boxwood	
					Rocky Mountain maple	
					Western goldthread	
					Western rattlesnake plan	
Grangemont-----	Western redcedar/queencup	Favorable	325		Other shrubs	
	beadlily (CN530)	Normal	200		Other perennial forbs	
		Unfavorable	50		Queencup beadlily	
					Bunchberry dogwood	
					Colombian brome	
					Common snowberry	
					Darkwoods violet	
					Dwarf rose	
					False Solomon's seal	
					Longtube twinflower	
					Myrtle boxwood	
					Rocky Mountain maple	
					Western goldthread	
					Western rattlesnake plan	
202:						
Rock outcrop-----			---			
Whiskeycreek-----	SHALLOW SOUTH SLOPE STONY 16-22	Favorable	850		Bluebunch wheatgrass	
	PSSPS-POSE (R009XY0261D)	Normal	650		Sandberg bluegrass	
		Unfavorable	400		Arrowleaf balsamroot	
					Bent milkvetch	
					Cous biscuitroot	
					Narrowleaf skullcap	
					Other perennial forbs	
					Penstemon	
					Silky lupine	
					Wyeth buckwheat	



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
202: Texascreek, dry	Ponderosa pine/Idaho fescue (CN140)	Favorable Normal Unfavorable	1,000 800 600	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Other shrubs Other perennial forbs Other perennial grasses Western yarrow	
203: Scaler-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
204: Scaler-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
204:			Lb/acre	
Grandad-----	Western redcedar/wild ginger (CN545)	Favorable		Other shrubs
		Normal	300	Other perennial forbs
		Unfavorable	200	Blue huckleberry
			100	Rocky Mountain maple
				Rusty menziesia
				Western goldthread
				British Columbia wilgdn
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Queencup beadlily
				Utah honeysuckle
205:				
Scaler-----	Western redcedar/queencup beadlily (CN530)	Favorable		Other shrubs
		Normal	325	Other perennial forbs
		Unfavorable	200	Queencup beadlily
			50	Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Rocky Mountain maple
				Western goldthread
				Western rattlesnake plan
Grangemont-----	Western redcedar/queencup beadlily (CN530)	Favorable		Other shrubs
		Normal	325	Other perennial forbs
		Unfavorable	200	Queencup beadlily
			50	Bunchberry dogwood
				Colombian brome
				Common snowberry
				Darkwoods violet
				Dwarf rose
				False Solomon's seal
				Longtube twinflower
				Myrtle boxwood
				Rocky Mountain maple
				Western goldthread
				Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
206:				Lb/acre	
Scand-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
Scaler-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
207: Seddow-----	Grand fir/twinflower (CN590)	Favorable Normal Unfavorable	1,800 1,100 300	Lb/acre	Longtube twinflower White spirea Blue huckleberry Colombian brome Common snowberry Dwarf rose Mallow ninebark Oceanspray Oregongrape Other shrubs Other perennial forbs Pinegrass Saskatoon serviceberry Western goldthread Western rattlesnake plan
208: Seddow-----	Grand fir/twinflower (CN590)	Favorable Normal Unfavorable	1,800 1,100 300		Longtube twinflower White spirea Blue huckleberry Colombian brome Common snowberry Dwarf rose Mallow ninebark Oceanspray Oregongrape Other shrubs Other perennial forbs Pinegrass Saskatoon serviceberry Western goldthread Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
209: Seddow-----	Grand fir/twinflower (CN590)	Favorable Normal Unfavorable	1,800 1,100 300		Longtube twinflower White spirea Blue huckleberry Colombian brome Common snowberry Dwarf rose Mallow ninebark Oceanspray Oregongrape Other shrubs Other perennial forbs Pinegrass Saskatoon serviceberry Western goldthread Western rattlesnake plan
210: Setters-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	1,200 800 400		Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea
211: Shattuck-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50		Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
212: Shattuck-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan
213: Shattuck, moist	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle
214: Shattuck, moist	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildgin False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
214: Dworshak, moist	Western redcedar/wild ginger (CN545)	Favorable			Other shrubs
		Normal		300	Other perennial forbs
		Unfavorable		200	Blue huckleberry
				100	Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
215: Shattuck-----	Western redcedar/queencup beadlily (CN530)	Favorable			Other shrubs
		Normal		325	Other perennial forbs
		Unfavorable		200	Queencup beadlily
				50	Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
Dworshak-----	Western redcedar/queencup beadlily (CN530)	Favorable			Other shrubs
		Normal		325	Other perennial forbs
		Unfavorable		200	Queencup beadlily
				50	Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
216: Sly-----	Grand fir/queencup beadlelily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlelily Saskatoon serviceberry Thimbleberry
Wilkins-----	DRY MEADOW (R009XY019ID)	Favorable Normal Unfavorable	2,000 1,300 800		Nevada bluegrass Other perennial forbs Alpine timothy Beauty cinquefoil Clover Sedge Slender wheatgrass Streambank wheatgrass
217: Southwick-----	Ponderosa pine/common snowberry (CN170)	Favorable Normal Unfavorable	1,200 950 650		Common snowberry Bluebunch wheatgrass Other shrubs Other perennial grasses White spirea Arrowleaf balsamroot Creeping Oregongrape Elk sedge Other perennial forbs Pinegrass Saskatoon serviceberry Woods' rose

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
218:				Lb/acre	
Southwick-----	Ponderosa pine/common snowberry (CN170)	Favorable	1,200	Common snowberry	
		Normal	950	Pinegrass	
		Unfavorable	650	Saskatoon serviceberry	
				Arrowleaf balsamroot	
				Bluebunch wheatgrass	
				Columbia brome	
				Elk sedge	
				Idaho fescue	
				Low Oregongrape	
				Other shrubs	
				Other perennial forbs	
				White spirea	
				Woodland strawberry	
				Woods' rose	
Larkin-----	Ponderosa pine/common snowberry (CN170)	Favorable	1,200	Common snowberry	
		Normal	950	Pinegrass	
		Unfavorable	650	Saskatoon serviceberry	
				Arrowleaf balsamroot	
				Bluebunch wheatgrass	
				Idaho fescue	
				Other shrubs	
				Other perennial forbs	
				Rose	
219:					
Statemeadow-----	Grand fir/queencup beadlelily (CN520)	Favorable	400	Other shrubs	
		Normal	200	Longtube twinflower	
		Unfavorable	50	Other perennial forbs	
				Western goldthread	
				American trailplant	
				Blue huckleberry	
				Colombian brome	
				Common snowberry	
				Dwarf rose	
				False Solomon's seal	
				Queencup beadlelily	
				Saskatoon serviceberry	
				Thimbleberry	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
219: Reggear-----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry
220: Swayne-----	Douglas-fir/ninebark (CN260)	Favorable Normal Unfavorable	1,600 1,200 800		Mallow ninebark Common snowberry Elk sedge Oceanspray Pinegrass Heartleaf arnica Other shrubs Other perennial forbs Other perennial grasses Saskatoon serviceberry White spirea
221: Taney-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	900 650 400		Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production		Characteristic vegeta
		Kind of year	Dry weight	
222: Taney-----	Douglas-fir/common snowberry (CN310)		Lb/acre	
		Favorable	900	Common snowberry
		Normal	650	Elk sedge
		Unfavorable	400	Baldhip rose
				Columbia brome
				Saskatoon serviceberry
				Blue wildrye
				Heartleaf arnica
				Low Oregongrape
				Other perennial forbs
				Pinegrass
				Sticky geranium
			Woodland strawberry	
Joel-----	Douglas-fir/ninebark (CN260)			
		Favorable	1,100	Elk sedge
		Normal	850	Common snowberry
		Unfavorable	600	Mallow ninebark
				Oceanspray
				Baldhip rose
				Columbia brome
				Low Oregongrape
				Pinegrass
				Saskatoon serviceberry
				Woodland strawberry
223: Taney-----	Douglas-fir/common snowberry (CN310)			
		Favorable	1,200	Common snowberry
		Normal	800	Elk sedge
		Unfavorable	400	Other perennial forbs
				Bluebunch wheatgrass
				Heartleaf arnica
				Other shrubs
				Other perennial grasses
				Pinegrass
				Saskatoon serviceberry
				White spirea

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
223: McCrosket-----	Douglas-fir/common snowberry (CN310)		Lb/acre		
		Favorable	1,200	Common snowberry	
		Normal	800	Elk sedge	
		Unfavorable	400	Other perennial forbs	
				Bluebunch wheatgrass	
				Heartleaf arnica	
				Other shrubs	
				Other perennial grasses	
				Pinegrass	
				Saskatoon serviceberry	
			White spirea		
224: Taney-----	Douglas-fir/common snowberry (CN310)				
		Favorable	1,200	Common snowberry	
		Normal	800	Elk sedge	
		Unfavorable	400	Other perennial forbs	
				Bluebunch wheatgrass	
				Heartleaf arnica	
				Other shrubs	
				Other perennial grasses	
				Pinegrass	
				Saskatoon serviceberry	
				White spirea	
Setters-----	Douglas-fir/common snowberry (CN310)				
		Favorable	1,200	Common snowberry	
		Normal	800	Elk sedge	
		Unfavorable	400	Other perennial forbs	
				Bluebunch wheatgrass	
				Heartleaf arnica	
				Other shrubs	
				Other perennial grasses	
				Pinegrass	
				Saskatoon serviceberry	
				White spirea	
225: Taney-----	Douglas-fir/common snowberry (CN310)				
		Favorable	1,200	Common snowberry	
		Normal	800	Elk sedge	
		Unfavorable	400	Other perennial forbs	
				Bluebunch wheatgrass	
				Heartleaf arnica	
				Other shrubs	
				Other perennial grasses	
				Pinegrass	
				Saskatoon serviceberry	
				White spirea	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
225: Setters-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	1,200 800 400	Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea	
226: Teatean-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150	Mallow ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry	
227: Tenab-----	MEADOW (R009XY018ID)	Favorable Normal Unfavorable	4,500 3,500 2,500	Other perennial forbs Tufted hairgrass Nebraska sedge Alpine timothy Baltic rush Other shrubs	
228: Texascreek-----	Douglas-fir/common snowberry (CN310)	Favorable Normal Unfavorable	1,200 800 400	Common snowberry Elk sedge Other perennial forbs Bluebunch wheatgrass Heartleaf arnica Other shrubs Other perennial grasses Pinegrass Saskatoon serviceberry White spirea	
Rock outcrop-----	---	---	---	---	---

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
229:					
Texascreek, dry	Ponderosa pine/Idaho fescue (CN140)	Favorable	1,000		Idaho fescue
		Normal	800		Bluebunch wheatgrass
		Unfavorable	600		Arrowleaf balsamroot
					Other shrubs
					Other perennial forbs
					Other perennial grasses
					Western yarrow
Whiskeycreek----					
	SHALLOW SOUTH SLOPE STONY 16-22	Favorable	850		Bluebunch wheatgrass
	PSSPS-POSE (R009XY026ID)	Normal	650		Sandberg bluegrass
		Unfavorable	400		Arrowleaf balsamroot
					Bent milkvetch
					Cous biscuitroot
					Narrowleaf skullcap
					Other perennial forbs
					Penstemon
					Silky lupine
					Wyeth buckwheat
230:					
Norwidge-----					
	Western redcedar/queencup	Favorable	325		Other shrubs
	beadlily (CN530)	Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plantain



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
230: Threebear-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	
231: Tomodo-----	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50	Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry	
232: Tomodo-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plan	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
232:				Lb/acre	
Lado-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle
233:					
Township-----	Western redcedar/queencup beadlily (CN530)	Favorable	325		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	50		Queencup beadlily
					Bunchberry dogwood
					Colombian brome
					Common snowberry
					Darkwoods violet
					Dwarf rose
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Rocky Mountain maple
					Western goldthread
					Western rattlesnake plan
Rettig-----	Western redcedar/wild ginger (CN545)	Favorable	300		Other shrubs
		Normal	200		Other perennial forbs
		Unfavorable	100		Blue huckleberry
					Rocky Mountain maple
					Rusty menziesia
					Western goldthread
					British Columbia wildgin
					False Solomon's seal
					Longtube twinflower
					Myrtle boxwood
					Queencup beadlily
					Utah honeysuckle

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
234: Township-----	Western redcedar/queencup beadlily (CN530)	Favorable Normal Unfavorable	325 200 50	Other shrubs Other perennial forbs Queencup beadlily Bunchberry dogwood Colombian brome Common snowberry Darkwoods violet Dwarf rose False Solomon's seal Longtube twinflower Myrtle boxwood Rocky Mountain maple Western goldthread Western rattlesnake plant	
Rettig-----	Western redcedar/wild ginger (CN545)	Favorable Normal Unfavorable	300 200 100	Other shrubs Other perennial forbs Blue huckleberry Rocky Mountain maple Rusty menziesia Western goldthread British Columbia wildginger False Solomon's seal Longtube twinflower Myrtle boxwood Queencup beadlily Utah honeysuckle	
235: Township, dry---	Grand fir/queencup beadlily (CN520)	Favorable Normal Unfavorable	400 200 50	Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlily Saskatoon serviceberry Thimbleberry	

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
235: Rettig, low precipitation--	Grand fir/queencup beadlelily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlelily Saskatoon serviceberry Thimbleberry
Nakarna, dry----	Grand fir/queencup beadlelily (CN520)	Favorable Normal Unfavorable	400 200 50		Other shrubs Longtube twinflower Other perennial forbs Western goldthread American trailplant Blue huckleberry Colombian brome Common snowberry Dwarf rose False Solomon's seal Queencup beadlelily Saskatoon serviceberry Thimbleberry
236: Trapper creek----	Subalpine fir/queencup beadlelily (CN620)	Favorable Normal Unfavorable	600 350 50		Blue huckleberry Common beargrass Other shrubs Rusty menziesia Western goldthread Colombian brome Darkwoods violet False Solomon's seal Other perennial forbs Queencup beadlelily Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
236: Narnett-----	Subalpine fir/queencup beادلily (CN620)	Favorable Normal Unfavorable	600 350 50		Blue huckleberry Common beargrass Other shrubs Rusty menziesia Western goldthread Columbian brome Darkwoods violet False Solomon's seal Other perennial forbs Queencup beادلily Western rattlesnake plant
237: UVI-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	650 400 150		Mallow ninebark Other shrubs Common snowberry Oceanspray Pinegrass Dwarf rose Other perennial forbs Rocky Mountain maple Saskatoon serviceberry Woodland strawberry
238: UVI-----	Grand fir/ninebark (CN506)	Favorable Normal Unfavorable	500 350 200		Mallow ninebark Common snowberry Oceanspray Baldhip rose Columbia brome Elk sedge Heartleaf arnica Other shrubs Other perennial forbs Pathfinder Piper's anemone Rocky Mountain maple Sweet-scented bedstraw White spirea Woodland strawberry

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
239: Vaywood, high precipitation--	Mountain hemlock/queencup beadlily (CN685)	Favorable Normal Unfavorable	700 500 300		Rusty menziesia Common beargrass Blue huckleberry Other perennial forbs Broadleaf arnica Darkwoods violet Other shrubs Queencup beadlily Utah honeysuckle
Vaywood, dry----	Mountain hemlock/menziesia (CN680)	Favorable Normal Unfavorable	600 400 200		Rusty menziesia Common beargrass Blue huckleberry Other perennial forbs Grouse whortleberry Other shrubs
240: Vaywood-----	Subalpine fir/queencup beadlily (CN620)	Favorable Normal Unfavorable	600 350 50		Blue huckleberry Common beargrass Other shrubs Rusty menziesia Western goldthread Colombian brome Darkwoods violet False Solomon's seal Other perennial forbs Queencup beadlily Western rattlesnake plan
241: Vaywood-----	Subalpine fir/queencup beadlily (CN620)	Favorable Normal Unfavorable	600 350 50		Blue huckleberry Common beargrass Other shrubs Rusty menziesia Western goldthread Colombian brome Darkwoods violet False Solomon's seal Other perennial forbs Queencup beadlily Western rattlesnake plan

Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
241: Handoff-----	Sitka alder/miner's lettuce (CN001)	Favorable Normal Unfavorable	2,000 1,500 1,000	Sitka alder Miner's lettuce Other shrubs Other perennial forbs	
242: Water-----	---	---	---	---	
243: Wellsbench-----	LOAMY 16-22 FEID-PSSPS (R009XY003ID)	Favorable Normal Unfavorable	1,800 1,500 1,200	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Common yarrow Indian paintbrush Northwest cinquefoil Prairie Junegrass Prairiesmoke Silky lupine	
244: Wellsbench-----	LOAMY 16-22 FEID-PSSPS (R009XY003ID)	Favorable Normal Unfavorable	1,800 1,500 1,200	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Common yarrow Indian paintbrush Northwest cinquefoil Prairie Junegrass Prairiesmoke Silky lupine	
Lacy-----	Ponderosa pine/Idaho fescue (CN140)	Favorable Normal Unfavorable	1,000 800 600	Idaho fescue Bluebunch wheatgrass Arrowleaf balsamroot Other shrubs Other perennial forbs Other perennial grasses Western yarrow	



Table 5.-Ecological Sites, Plant Associations, and Characteristic Plant Communities-

Map symbol and soil name	Ecological site or plant association	Total production			Characteristic vegeta
		Kind of year	Dry weight		
245:					
Wilkins-----	DRY MEADOW (R009XY019ID)				
		Favorable	2,000		Nevada bluegrass
		Normal	1,300		Other perennial forbs
		Unfavorable	800		Alpine timothy
					Beauty cinquefoil
					Clover
					Sedge
					Slender wheatgrass
					Streambank wheatgrass

# Soil Survey of Clearwater Area, Idaho

**Table 6.**—Nonirrigated Crop Yields

(Yields are those that can be expected under a high level of management. Only the soils that support nonirrigated crops are listed. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Barley	Grass-legume hay	Dry lentils	Pasture	Winter wheat
	Bu	Tons	Lbs	AUM	Bu
43: Burntcreek-----	---	---	---	2.50	---
46: Carlinton-----	35.00	---	---	2.50	40.00
47: Carlinton-----	40.00	---	---	3.00	45.00
48: Carlinton-----	40.00	---	---	3.00	45.00
Kruse-----	40.00	---	---	3.00	45.00
49: Carlinton-----	40.00	---	---	3.00	45.00
Seddow-----	40.00	---	---	3.00	50.00
51: Cavendish-----	45.00	---	1,000.00	3.00	55.00
52: Cavendish-----	45.00	---	---	4.00	60.00
Taney-----	45.00	---	1,000.00	4.00	55.00
56: Crumarine-----	40.00	2.00	---	5.00	---
58: Driscoll-----	50.00	---	900.00	3.00	65.00
59: Driscoll-----	50.00	---	900.00	3.00	65.00
Larkin-----	50.00	---	1,200.00	3.00	60.00
72: Elkridge-----	---	---	---	2.00	---
Riswold-----	---	---	---	2.50	---
87: Gramil-----	---	---	---	3.50	---
Lewhand-----	---	---	---	2.00	---
88: Gramil-----	---	---	---	3.50	---
Reggear-----	35.00	---	---	2.50	40.00
95: Grangemont-----	35.00	---	---	2.50	40.00
Kauder-----	35.00	---	---	2.00	40.00

# Soil Survey of Clearwater Area, Idaho

Table 6.—Nonirrigated Crop Yields—Continued

Map symbol and soil name	Barley	Grass-legume hay	Dry lentils	Pasture	Winter wheat
	Bu	Tons	Lbs	AUM	Bu
115: Jacket-----	40.00	---	---	3.00	50.00
116: Jacket-----	50.00	2.50	1,200.00	4.00	65.00
117: Jacket-----	40.00	2.25	---	3.00	45.00
Wellsbench-----	35.00	---	---	2.00	40.00
123: Joel-----	50.00	---	1,000.00	3.50	60.00
Setters-----	50.00	---	800.00	3.50	50.00
133: Kauder-----	35.00	---	---	2.00	40.00
141: Keuterville-----	40.00	2.00	---	5.00	45.00
150: Kooskia-----	40.00	---	---	3.00	50.00
151: Kooskia-----	40.00	---	---	3.00	50.00
152: Kruse-----	35.00	2.00	---	---	---
159: Larkin-----	40.00	---	---	3.00	55.00
Driscoll-----	40.00	---	900.00	3.00	60.00
160: Lebaron-----	---	---	---	3.00	---
Latahco-----	---	---	---	3.00	---
161: Lewhand-----	---	---	---	2.00	---
Burntcreek-----	---	---	---	2.50	---
162: Lewhand-----	---	---	---	2.00	---
Teneb-----	---	---	---	---	---
167: Meland-----	40.00	2.00	---	3.50	45.00
Jacket-----	50.00	2.00	1,200.00	4.00	65.00
168: Meland-----	40.00	2.00	---	3.50	45.00
Keuterville-----	40.00	---	---	---	---

# Soil Survey of Clearwater Area, Idaho

Table 6.—Nonirrigated Crop Yields—Continued

Map symbol and soil name	Barley	Grass-legume hay	Dry lentils	Pasture	Winter wheat
	Bu	Tons	Lbs	AUM	Bu
191:					
Reggear-----	35.00	---	---	2.50	40.00
Kauder-----	35.00	---	---	2.00	40.00
192:					
Reggear-----	35.00	---	---	2.50	40.00
Seddow-----	40.00	---	---	3.00	50.00
201:					
Riswold-----	35.00	---	---	2.50	40.00
Grangemont-----	35.00	---	---	2.50	40.00
207:					
Seddow-----	40.00	---	---	3.00	50.00
208:					
Seddow-----	35.00	---	---	3.00	45.00
209:					
Seddow-----	40.00	---	---	3.00	50.00
210:					
Setters-----	50.00	---	800.00	3.50	50.00
216:					
Sly-----	---	---	---	---	---
Wilkins-----	---	---	---	2.00	---
217:					
Southwick-----	60.00	---	1,000.00	3.00	70.00
218:					
Southwick-----	55.00	2.00	900.00	4.00	65.00
Larkin-----	40.00	2.00	1,200.00	4.00	70.00
220:					
Swayne-----	---	2.00	---	---	---
221:					
Taney-----	50.00	---	1,000.00	3.00	60.00
222:					
Taney-----	45.00	2.00	1,000.00	4.00	55.00
Joel-----	50.00	2.00	1,000.00	3.50	55.00
223:					
Taney-----	40.00	---	---	2.50	55.00
McCrosket-----	35.00	---	---	2.50	45.00
224:					
Taney-----	50.00	---	1,000.00	3.00	65.00
Setters-----	50.00	---	800.00	2.50	50.00

# Soil Survey of Clearwater Area, Idaho

Table 6.—Nonirrigated Crop Yields—Continued

Map symbol and soil name	Barley	Grass-legume hay	Dry lentils	Pasture	Winter wheat
	<i>Bu</i>	<i>Tons</i>	<i>Lbs</i>	<i>AUM</i>	<i>Bu</i>
225:					
Taney-----	50.00	---	1,000.00	3.00	65.00
Setters-----	50.00	---	800.00	2.50	50.00
245:					
Wilkins-----	45.00	---	800.00	4.00	45.00

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification

Map symbol and soil name	Land capability subclass (nonirrigated)
1:	
Agatha, very rocky-----	7e
Rock outcrop-----	8
2:	
Agatha-----	6e
3:	
Agatha-----	8e
4:	
Ahsahka-----	6e
Fordcreek-----	6e
5:	
Ahsahka-----	7e
Whiskeycreek-----	7e
6:	
Aldermand-----	7e
7:	
Aldermand-----	7e
8:	
Aldermand, dry-----	7e
9:	
Aquandic Cryaquepts-----	6w
10:	
Aquandic Endoaquepts-----	4w
Aquandic Dystrudepts-----	4w
11:	
Bandmill, dry-----	6e
Grangemont-----	4e
Bargamin-----	6e
12:	
Bandmill-----	4e
Riswold-----	4e
13:	
Berthahill, moist-----	6e
Handoff-----	6e
14:	
Berthahill-----	7e
Handoff-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
15:	
Berthahill-----	6e
Shattuck-----	6e
16:	
Bigtalk, cool-----	7e
Bigtalk, wet-----	7e
17:	
Bigtalk-----	7e
18:	
Bigtalk, cool-----	6e
Floodwood, cool-----	6e
19:	
Bigtalk, cool-----	6e
Keeler, cool-----	6e
20:	
Bouldercreek, moist-----	6e
21:	
Bouldercreek-----	7e
22:	
Bouldercreek-----	7e
23:	
Bouldercreek, moist-----	7e
Brodeer-----	7e
24:	
Bouldercreek-----	7e
Brodeer-----	7e
25:	
Bouldercreek-----	8e
Judgetown-----	7e
26:	
Bouldercreek, high precipitation-----	7e
Marblecreek-----	7e
27:	
Bouldercreek, cool, dry-----	8e
Rettig, cool-----	8e
28:	
Brequito, dry-----	7e



# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
29:	
Brequito-----	7e
Grangemont-----	6e
30:	
Brequito-----	6e
Lado, dry-----	6e
31:	
Brequito-----	4e
Lado, dry-----	4e
32:	
Brequito-----	6e
Mushel-----	6e
33:	
Brequito-----	7e
Mushel-----	7e
34:	
Brodeer, dry-----	6e
Brodeer-----	6e
35:	
Brodeer-----	6e
Mushel-----	6e
36:	
Brodeer, warm-----	6e
Mushel, dry-----	6e
37:	
Brodeer-----	6e
Boulder creek-----	6e
38:	
Brodeer-----	7e
Flewsie, dry-----	7e
39:	
Brodeer-----	7e
Lostpete-----	6e
40:	
Brodeer, moist-----	6e
Lostpete, moist-----	6e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
41:	
Brodeer, dry-----	7e
Mushel-----	7e
42:	
Brodeer-----	7e
Mushel-----	7e
43:	
Burntcreek-----	4w
44:	
Campra-----	8e
45:	
Campra-----	6e
Sly-----	6e
46:	
Carlinton-----	6e
47:	
Carlinton-----	4e
48:	
Carlinton-----	4e
Kruse-----	4e
49:	
Carlinton-----	3e
Seddow-----	3e
50:	
Caseycreek-----	4e
51:	
Cavendish-----	3e
52:	
Cavendish-----	4e
Taney-----	4e
53:	
Cobbler-----	7e
Aldermant-----	7e
54:	
Cobbler-----	8e
Noil-----	8e
55:	
Cranberry-----	7e
Riswold-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
56: Crumarine-----	3w
57: Dam-----	8
58: Driscoll-----	3e
59: Driscoll-----	4e
Larkin-----	4e
60: Dullaxe, high elevation-----	7e
Dullaxe-----	7e
61: Dullaxe, dry-----	7e
Dullaxe, wet-----	7e
62: Dullaxe-----	6e
Brodeer-----	6e
63: Dullaxe-----	8e
Brodeer-----	8e
64: Dullaxe-----	7e
Judgetown-----	7e
65: Dullaxe-----	7e
Judgetown, moist-----	7e
66: Dullaxe-----	7e
Jury, moist-----	7e
67: Dumps, wood slash-----	8
68: Dworshak-----	7e
69: Dworshak-----	6e
Brequito-----	6e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
70:	
Elkberry-----	6e
Elkberry, wet-----	6e
71:	
Elkberry-----	6e
Dworshak-----	6e
72:	
Elkridge-----	6e
Riswold-----	6e
73:	
Elkridge-----	7e
Riswold-----	7e
74:	
Fico, dry-----	7e
Hucberit, warm-----	7e
75:	
Fico-----	6e
Weitas-----	6e
76:	
Flewsie, high precipitation-----	7e
77:	
Flewsie, low precipitation-----	7e
Flewsie, dry-----	7e
78:	
Floodwood-----	7e
79:	
Floodwood, warm-----	7e
Keeler-----	7e
80:	
Floodwood-----	6e
Keeler, warm-----	6e
81:	
Floodwood-----	7e
Keeler, warm-----	7e
82:	
Flumecreek-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
83:	
Flumecreek-----	6e
Stepoff-----	6e
Dworshak, dry-----	6e
84:	
Fordcreek-----	7e
85:	
Fordcreek-----	3e
86:	
Garveson, high precipitation-----	7e
Floodwood-----	7e
87:	
Gramil-----	4e
Lewhand-----	4w
88:	
Gramil-----	4e
Reggear-----	4e
89:	
Grandad-----	6e
90:	
Grandad, dry-----	6e
Grandad-----	6e
91:	
Grandad, dry-----	7e
Grandad-----	7e
92:	
Grandad-----	6e
Rettig-----	6e
93:	
Grandad, wet-----	7e
Rettig, wet-----	7e
94:	
Grandad, dry-----	7e
Scand-----	7e
95:	
Grangemont-----	4e
Kauder-----	4e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
96:	
Grangemont, dry-----	4e
Kauder, dry-----	4e
97:	
Grangemont-----	4e
Kauder, moist-----	4e
98:	
Grangemont, wet-----	6e
Riswold-----	7e
99:	
Grasshopper-----	5w
100:	
Gwin-----	7e
Kettenbach-----	7e
101:	
Gwin-----	7e
Kettenbach-----	4e
Keuterville-----	4e
102:	
Hildebrand-----	4e
Spacecreek, dry-----	4e
103:	
Hubub, wet-----	6e
104:	
Hubub, wet-----	4e
Dworshak-----	4e
105:	
Hubub-----	6e
Lostpete-----	6e
106:	
Hucberit-----	6e
107:	
Hucberit-----	7e
Vaywood, high precipitation-----	7e
108:	
Hugus-----	6e
109:	
Hugus-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
110: Hugus, moist-----	6e
111: Hugus, high precipitation-----	7e
112: Hugus, moist-----	7e
Hugus-----	7e
113: Hugus-----	6e
Dworshak-----	6e
114: Itzee-----	3e
115: Jacket-----	6e
116: Jacket-----	2e
117: Jacket-----	6e
Wellsbench-----	6e
118: Jacot-----	6e
Garveson-----	6e
119: Jacot-----	7e
Garveson-----	7e
120: Jaype-----	6e
Revling-----	6e
121: Jaype, dry-----	6e
Revling, dry-----	6e
122: Jaype-----	7e
Statemeadow-----	6e
123: Joel-----	4e
Setters-----	4e



# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
124: Johnson-----	7e
125: Johnson-----	6e
Swayne-----	6e
126: Johnson-----	8e
Swayne-----	7e
127: Johnson-----	7e
Texascreek-----	7e
128: Jury-----	6e
129: Jury-----	7e
130: Jury, cold-----	7e
131: Jury-----	7e
Weitas-----	6e
132: Jury-----	4e
Weitas-----	6e
133: Kauder-----	4e
134: Keeler, dry-----	7e
Keeler-----	7e
135: Keeler, moist-----	7e
Keeler-----	7e
136: Keeler-----	7e
Aldermant-----	7e
137: Keeler-----	7e
Jacot-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
138:	
Keeler-----	6e
Lado-----	6e
139:	
Kettenbach-----	8e
Gwin-----	8e
Rock outcrop-----	8
140:	
Kettenbach-----	7e
Keuterville-----	7e
141:	
Keuterville-----	4e
142:	
Keuterville-----	7e
143:	
Keuterville-----	7e
Rock outcrop-----	8
144:	
Klickson-----	6e
145:	
Klickson-----	8e
146:	
Klickson-----	7e
Agatha-----	7e
147:	
Klickson-----	8e
Kettenbach-----	8e
148:	
Klickson-----	8e
Rock outcrop-----	8
Kettenbach-----	8e
149:	
Konkol-----	6e
Revling-----	6e
150:	
Kooskia-----	4e
151:	
Kooskia-----	3e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
152: Kruse-----	6e
153: Kruse-----	7e
154: Kruse-----	6e
Aldermant-----	6e
155: Kruse-----	7e
Aldermant-----	7e
156: Kruse-----	7e
McCrosket, dry-----	7e
157: Kruse-----	6e
Noil-----	6e
158: Kruse-----	7e
Teakean-----	7e
159: Larkin-----	7e
Driscoll-----	6e
160: Lebaron-----	4w
Latahco-----	3w
161: Lewhand-----	4w
Burntcreek-----	4w
162: Lewhand-----	4w
Teneb-----	4w
163: Longbar-----	6e
Bigtalk-----	6e
164: Longbar-----	7e
Bigtalk-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
165: Longpen-----	6e
166: Longpen-----	4e
167: Meland-----	4e
Jacket-----	3e
168: Meland-----	4e
Keuterville-----	6e
169: Mushel-----	6e
Brodeer-----	6e
170: Mushel-----	7e
Dullaxe-----	7e
171: Nakarna, high precipitation-----	6e
172: Nakarna, high precipitation-----	7e
173: Nakarna-----	7e
Nakarna, warm-----	7e
174: Narnett-----	6e
Jury-----	6e
175: Neva-----	7e
176: Newlig-----	4e
177: Noil-----	8e
Keeler-----	8e
178: Noil-----	8e
Boulder creek, warm-----	8e
Rock outcrop-----	8

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
179:	
Norwidge, moist-----	4e
Threebear, moist-----	6e
180:	
Odonnell-----	6e
Grandad-----	6e
181:	
Odonnell-----	6e
182:	
Oxyaquic Xerofluvents, occasionally flooded-----	5w
Itzee-----	3e
183:	
Pits, quarry-----	8
184:	
Placer-----	6e
Dowper-----	6e
Grangemont-----	4e
185:	
Poorman, dry-----	7e
186:	
Poorman, dry-----	6e
Poorman-----	6e
187:	
Poorman-----	6e
Grandad-----	6e
188:	
Poorman-----	7e
Grandad-----	7e
189:	
Poorman-----	6e
Grandad, dry-----	7e
190:	
Poorman-----	7e
Grandad, dry-----	7e
191:	
Reggear-----	4e
Kauder-----	4e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
192:	
Reggear-----	4e
Seddow-----	3e
193:	
Rettig, high elevation-----	7e
194:	
Rettig-----	6e
195:	
Rettig, cold-----	6e
196:	
Rettig, cool-----	7e
Rettig, dry-----	7e
197:	
Rettig-----	7e
Grandad-----	7e
198:	
Rettig, warm, dry-----	7e
Township-----	7e
199:	
Rettig-----	7e
Township, wet-----	7e
Stepoff-----	7e
200:	
Riswold-----	4e
Cranberry-----	4e
201:	
Riswold-----	6e
Grangemont-----	6e
202:	
Rock outcrop-----	8
Whiskeycreek-----	8e
Texascreek, dry-----	8e
203:	
Scaler-----	6e
204:	
Scaler-----	7e
Grandad-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
205:	
Scaler-----	7e
Grangemont-----	6e
206:	
Scand-----	6e
Scaler-----	6e
207:	
Seddow-----	4e
208:	
Seddow-----	7e
209:	
Seddow-----	3e
210:	
Setters-----	3e
211:	
Shattuck-----	7e
212:	
Shattuck-----	7e
213:	
Shattuck, moist-----	7e
214:	
Shattuck, moist-----	6e
Dworshak, moist-----	6e
215:	
Shattuck-----	6e
Dworshak-----	6e
216:	
Sly-----	4e
Wilkins-----	3w
217:	
Southwick-----	3e
218:	
Southwick-----	4e
Larkin-----	4e
219:	
Statemeadow-----	4e
Reggear-----	4e
220:	
Swayne-----	6e



# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
221: Taney-----	3e
222: Taney-----	4e
Joel-----	4e
223: Taney-----	6e
McCrosket-----	6e
224: Taney-----	3e
Setters-----	3e
225: Taney-----	4e
Setters-----	4e
226: Teakean-----	7e
227: Teneb-----	4w
228: Texascreek-----	8e
Rock outcrop-----	8
229: Texascreek, dry-----	7e
Whiskeycreek-----	7e
230: Norwidge-----	4e
Threebear-----	4e
231: Tomodo-----	6e
232: Tomodo-----	6e
Lado-----	6e
233: Township-----	6e
Rettig-----	6e
234: Township-----	7e
Rettig-----	7e

# Soil Survey of Clearwater Area, Idaho

Table 7.—Land Capability Classification—Continued

Map symbol and soil name	Land capability subclass (nonirrigated)
235:	
Township, dry-----	7e
Rettig, low precipitation-----	7e
Nakarna, dry-----	7e
236:	
Trappercreek-----	6e
Narnett-----	6e
237:	
Uvi-----	7e
238:	
Uvi-----	7e
239:	
Vaywood, high precipitation-----	6e
Vaywood, dry-----	6e
240:	
Vaywood-----	7e
241:	
Vaywood-----	6e
Handoff-----	6e
242:	
Water-----	8
243:	
Wellsbench-----	3e
244:	
Wellsbench-----	7e
Lacy-----	7e
245:	
Wilkins-----	3w

Table 8.—Prime and other Important Farmland

(Only the soils considered prime or important farmland are listed. Urban or built-up areas of are not considered prime or important farmland. If a soil is prime or important farmland certain conditions, the conditions are specified after the classification.)

	Map symbol	Map unit name	Farmland cl
51		Cavendish silt loam, 2 to 8 percent slopes	All areas are prime fa
102		Hildebrand-Spacecreek complex, 2 to 12 percent slopes	All areas are prime fa
114		Itzee sandy loam, 0 to 12 percent slopes	All areas are prime fa
12		Bandmill-Riswold complex, 5 to 20 percent slopes	Farmland of statewide
31		Brequito-Lado complex, 5 to 15 percent slopes	Farmland of statewide
104		Hubub-Dworshak complex, 5 to 20 percent slopes	Farmland of statewide
116		Jacket silt loam, 3 to 12 percent slopes	Farmland of statewide
128		Jury medial silt loam, 10 to 30 percent slopes	Farmland of statewide
141		Keuterville gravelly silt loam, 10 to 25 percent slopes	Farmland of statewide
166		Longpen ashy silt loam, 5 to 20 percent slopes	Farmland of statewide
167		Meland-Jacket complex, 5 to 20 percent slopes	Farmland of statewide
176		Newlig silt loam, 5 to 20 percent slopes	Farmland of statewide
209		Seddo ash silt loam, 5 to 15 percent slopes	Farmland of statewide
220		Swayne silt loam, 10 to 35 percent slopes	Farmland of statewide
243		Wellsbench silt loam, 2 to 10 percent slopes	Farmland of statewide
47		Carlinton ashy silt loam, 3 to 20 percent slopes	Farmland of statewide
48		Carlinton-Kruse complex, 5 to 20 percent slopes	Farmland of statewide
49		Carlinton-Seddo complex, 3 to 15 percent slopes	Farmland of statewide
52		Cavendish-Taney complex, 8 to 20 percent slopes	Farmland of statewide
95		Grangemont-Kauder complex, 5 to 20 percent slopes	Farmland of statewide
96		Grangemont-Kauder complex, dry, 5 to 20 percent slopes	Farmland of statewide
97		Grangemont-Kauder complex, 5 to 30 percent slopes	Farmland of statewide
123		Joel-Setters complex, 5 to 20 percent slopes	Farmland of statewide
133		Kauder ashy silt loam, 5 to 20 percent slopes	Farmland of statewide
150		Koskia silt loam, 10 to 20 percent slopes	Farmland of statewide
160		Lebaron-Latahco complex, 0 to 3 percent slopes	Farmland of statewide
179		Norwidge-Threebear complex, moist, 5 to 25 percent slopes	Farmland of statewide
191		Reggear-Kauder complex, 5 to 20 percent slopes	Farmland of statewide
192		Reggear-Seddo complex, 5 to 15 percent slopes	Farmland of statewide
216		Sly-Wilkins complex, 3 to 15 percent slopes	Farmland of statewide
217		Southwick silt loam, 3 to 12 percent slopes	Farmland of statewide
219		Statemeadow-Reggear complex, 5 to 15 percent slopes	Farmland of statewide
221		Taney ashy silt loam, 3 to 10 percent slopes	Farmland of statewide
222		Taney-Joel complex, 10 to 20 percent slopes	Farmland of statewide
225		Taney-Setters complex, 8 to 20 percent slopes	Farmland of statewide
230		Norwidge-Threebear complex, 5 to 25 percent slopes	Farmland of statewide
10		Aquandic Endoaquepts and Aquandic Dystrudepts soils, 0 to 10 percent slopes	Prime farmland, if dra
43		Burntcreek ashy loam, 0 to 3 percent slopes	Prime farmland, if dra
50		Caseycreek ashy silt loam, 2 to 15 percent slopes	Prime farmland, if dra
56		Crumarine silt loam, 0 to 3 percent slopes	Prime farmland, if dra
87		Gramil-Lewhand complex, 0 to 2 percent slopes	Prime farmland, if dra

Table 8.-Prime and other Important Farmland-Continued

Map symbol	Map unit name	Farmland cl
88	Gramil-Reggear complex, 2 to 6 percent slopes	Prime farmland, if dra
99	Grasshopper ash loam, 0 to 3 percent slopes	Prime farmland, if dra
151	Kooskia silt loam, 3 to 10 percent slopes	Prime farmland, if dra
161	Lewhand-Burntcreek complex, 0 to 2 percent slopes	Prime farmland, if dra
182	Oxyaquic Xerofluvents-Itzee complex, 0 to 5 percent slopes	Prime farmland, if dra
210	Setters silt loam, 3 to 8 percent slopes	Prime farmland, if dra
224	Taney-Setters complex, 3 to 8 percent slopes	Prime farmland, if dra
245	Wilkins silt loam, 0 to 5 percent slopes	Prime farmland, if dra
162	Lewhand-Teneb complex, 0 to 2 percent slopes	protected from floodi
		frequently flooded du
		season
227	Teneb ash silt loam, 0 to 2 percent slopes	Prime farmland, if dra
		protected from floodi
		frequently flooded du
		season

# Soil Survey of Clearwater Area, Idaho

**Table 9.**—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky---	70	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	1.00 1.00 1.00
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	1.00 1.00 1.00
3: Agatha-----	75	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	1.00 1.00 1.00
4: Ahsahka-----	45	Very limited Too steep Slow water movement	1.00 0.81	Very limited Too steep Slow water movement Too acid	1.00 0.67 0.01
Fordcreek-----	40	Very limited Too steep	1.00	Very limited Low adsorption Too steep	1.00 1.00
5: Ahsahka-----	50	Very limited Too steep Slow water movement	1.00 0.81	Very limited Too steep Slow water movement Too acid	1.00 0.67 0.01
Whiskeycreek-----	30	Very limited Too steep Filtering capacity Depth to bedrock Droughty Runoff	1.00 1.00 1.00 1.00 0.40	Very limited Filtering capacity Depth to bedrock Low adsorption Droughty Too steep	1.00 1.00 1.00 1.00
6: Aldermant-----	85	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
7: Aldermand-----	90	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
8: Aldermand, dry-----	75	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
9: Aquandic Cryaquepts	90	Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Flooding	1.00	Flooding	1.00
		Leaching	0.70	Too acid	0.96
		Too acid	0.37		
10: Aquandic Endoaquepts	60	Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slow water	0.50	Flooding	1.00
		movement		Too acid	0.96
		Too acid	0.37	Slow water	0.37
		Flooding	0.60	movement	
		Leaching	0.50		
Aquandic Dystrudepts	20	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slow water	0.57	Flooding	1.00
		movement		Too acid	1.00
		Too acid	0.50	Slow water	0.43
		Flooding	0.60	movement	
11: Bandmill, dry-----	40	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too steep	1.00
Grangemont-----	30	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slope	0.84	Too acid	1.00
		Too acid	0.50	Slope	0.84
Bargamin-----	25	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Too steep	1.00	Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12: Bandmill-----	40	Very limited Filtering capacity Slope	1.00 0.63	Very limited Filtering capacity Slope	1.00 0.63
Riswold-----	30	Very limited Filtering capacity Slope Slow water movement	1.00 0.63 0.50	Very limited Filtering capacity Low adsorption Slope Slow water movement	1.00 1.00 0.63 0.37
13: Berthahill, moist---	75	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	1.00 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 1.00
Handoff-----	15	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	1.00 1.00 0.46	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 0.46
14: Berthahill-----	70	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	1.00 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 1.00
Handoff-----	20	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	1.00 1.00 0.46	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 0.46
15: Berthahill-----	65	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	1.00 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
15: Shattuck-----	15	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Strongly	1.00	Strongly	1.00
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
		Slow water	0.41	Too acid	1.00
		movement		Slow water	0.31
		Too acid	0.50	movement	
16: Bigtalk, cool-----	60	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
Bigtalk, wet-----	25	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
17: Bigtalk-----	80	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
18: Bigtalk, cool-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
Floodwood, cool-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
19: Bigtalk, cool-----	75	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
Keeler, cool-----	20	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20: Bouldercreek, moist	85	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 0.99    0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Strongly contrasting textural stratification	 1.00 1.00 1.00 1.00 0.99   
21: Bouldercreek-----	75	Very limited Too steep Droughty	 1.00 0.20	Very limited Too steep Droughty	 1.00 0.20
22: Bouldercreek-----	75	Very limited Too steep Droughty	 1.00 0.20	Very limited Too steep Droughty	 1.00 0.20
23: Bouldercreek, moist	75	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 0.99    0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Strongly contrasting textural stratification	 1.00 1.00 1.00 1.00 0.99   
Brodeer-----	15	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
24: Bouldercreek-----	65	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 0.99    0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Strongly contrasting textural stratification	 1.00 1.00 1.00 1.00 0.99   
Brodeer-----	25	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25: Bouldercreek-----	55	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 0.99   0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Strongly contrasting textural stratification	 1.00 1.00 1.00 1.00 0.99   
Judgetown-----	25	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
26: Bouldercreek, high precipitation-----	50	Very limited Too steep Droughty	 1.00 0.20	Very limited Too steep Droughty	 1.00 0.20
Marblecreek-----	30	Very limited Too steep Filtering capacity Droughty Too acid	 1.00 1.00 0.16 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Droughty	 1.00 1.00 1.00 1.00 0.16
27: Bouldercreek, cool, dry-----	70	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Rettig, cool-----	25	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
28: Brequito, dry-----	65	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
29: Brequito-----	45	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Grangemont-----	40	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
30: Brequito-----	45	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Lado, dry-----	35	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
31: Brequito-----	60	Very limited Filtering capacity Slope Too acid	 1.00 0.16 0.50	Very limited Filtering capacity Too acid Slope	 1.00 1.00 0.16
Lado, dry-----	25	Very limited Filtering capacity Slope	 1.00 0.16	Very limited Filtering capacity Slope	 1.00 0.16
32: Brequito-----	50	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Mushel-----	35	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
33: Brequito-----	50	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Mushel-----	35	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
34: Brodeer, dry-----	55	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
Brodeer-----	40	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
35: Brodeer-----	45	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
35: Mushel-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
36: Brodeer, warm-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
Mushel, dry-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
37: Brodeer-----	65	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
Bouldercreek-----	25	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly	0.99	Too steep	1.00
		contrasting		Too acid	1.00
		textural		Strongly	0.99
		stratification		contrasting	
		Too acid	0.50	textural	
				stratification	
38: Brodeer-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
Flewsie, dry-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
39: Brodeer-----	60	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
Lostpete-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
40: Brodeer, moist-----	55	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
40: Lostpete, moist-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
41: Brodeer, dry-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
Mushel-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
42: Brodeer-----	60	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
Mushel-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
43: Burntcreek-----	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Leaching	0.70	Flooding	1.00
		Flooding	0.60	Too acid	0.42
		Too acid	0.11		
44: Campra-----	80	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water movement	1.00	Slow water movement	1.00
45: Campra-----	45	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Too steep	1.00	Too steep	1.00
Sly-----	40	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too steep	1.00
		Slow water movement	0.30	Slow water movement	0.22

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
46: Carlinton-----	80	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Slow water	1.00
		Slow water	1.00	movement	
		movement		Depth to saturated	1.00
		Depth to saturated	1.00	zone	
		zone		Too steep	1.00
		Too acid	0.50	Too acid	1.00
47: Carlinton-----	85	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slope	0.63	Too acid	1.00
		Too acid	0.50	Slope	0.63
48: Carlinton-----	50	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slope	0.16	Too acid	1.00
		Too acid	0.50	Slope	0.16
Kruse-----	35	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too acid	1.00
		Slow water	0.50	Too steep	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
49: Carlinton-----	55	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slope	0.04	Too acid	1.00
		Too acid	0.50	Slope	0.04
Seddow-----	35	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slope	0.04	Slope	0.04
50: Caseycreek-----	80	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated	0.95	Depth to saturated	0.95
		zone		zone	



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
51: Cavendish-----	75	Somewhat limited Slow water movement	0.50	Somewhat limited Slow water movement	0.37
52: Cavendish-----	45	Somewhat limited Slope Slow water movement	0.96 0.50	Somewhat limited Slope Slow water movement	0.96 0.37
Taney-----	40	Very limited Slow water movement Depth to saturated zone Slope Leaching Too acid	1.00 1.00 0.96 0.50 0.02	Very limited Slow water movement Depth to saturated zone Slope Too acid	1.00 1.00 0.96 0.07
53: Cobbler-----	55	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	1.00 1.00 1.00
Aldermant-----	35	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	1.00 1.00 1.00 1.00
54: Cobbler-----	50	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	1.00 1.00 1.00
Noil-----	45	Very limited Too steep Filtering capacity Droughty Too acid	1.00 1.00 0.29 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Droughty	1.00 1.00 1.00 1.00 0.29
55: Cranberry-----	60	Very limited Too steep Filtering capacity Slow water movement Too acid	1.00 1.00 0.81 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Slow water movement	1.00 1.00 1.00 1.00 0.68

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
55: Riswold-----	20	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Slow water	0.50	Too steep	1.00
		movement		Slow water	0.37
				movement	
56: Crumarine-----	95	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Droughty	0.10	Too acid	0.77
		Leaching	0.70	Droughty	0.10
		Too acid	0.22	Flooding	0.40
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Very limited		Very limited	
		Slow water	1.00	Depth to saturated	1.00
		movement		zone	
		Depth to saturated	1.00	Slow water	1.00
		zone		movement	
		Strongly	0.90	Strongly	0.90
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
		Leaching	0.50	Too acid	0.14
		Too acid	0.03		
59: Driscoll-----	45	Very limited		Very limited	
		Slow water	1.00	Depth to saturated	1.00
		movement		zone	
		Depth to saturated	1.00	Slow water	1.00
		zone		movement	
		Too steep	1.00	Too steep	1.00
		Strongly	0.90	Strongly	0.90
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
		Leaching	0.50	Too acid	0.14
Larkin-----	35	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
60: Dullaxe, high elevation-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
60: Dullaxe-----	35	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
61: Dullaxe, dry-----	60	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Dullaxe, wet-----	35	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
62: Dullaxe-----	50	Very limited Filtering capacity Too steep	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Brodeer-----	35	Very limited Filtering capacity Too steep	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
63: Dullaxe-----	60	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Brodeer-----	25	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
64: Dullaxe-----	60	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Judgetown-----	35	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
65: Dullaxe-----	70	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Judgetown, moist----	25	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
66: Dullaxe-----	55	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Jury, moist-----	30	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
67: Dumps, wood slash---	100	Not rated		Not rated	
68: Dworshak-----	85	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
69: Dworshak-----	80	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
Brequito-----	15	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
70: Elkberry-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Slow water	0.30	Too steep	1.00
		movement		Too acid	1.00
		Too acid	0.50	Slow water	0.22
				movement	
Elkberry, wet-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Slow water	0.30	Too steep	1.00
		movement		Too acid	1.00
		Too acid	0.50	Slow water	0.22
				movement	
71: Elkberry-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Slow water	0.30	Too steep	1.00
		movement		Too acid	1.00
		Too acid	0.50	Slow water	0.22
				movement	
Dworshak-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
72: Elkridge-----	55	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Riswold-----	40	Very limited Too steep Filtering capacity Slow water movement Too acid	 1.00 1.00 0.50  0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Slow water movement	 1.00 1.00 1.00 1.00 0.37
73: Elkridge-----	65	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Riswold-----	30	Very limited Too steep Filtering capacity Slow water movement Too acid	 1.00 1.00 0.50  0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Slow water movement	 1.00 1.00 1.00 1.00 0.37
74: Fico, dry-----	55	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
Hucberit, warm-----	35	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep	 1.00 1.00 1.00
75: Fico-----	50	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
Weitas-----	40	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.32	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 0.91
76: Flewsie, high precipitation-----	75	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
77: Flewsie, low precipitation-----	70	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Flewsie, dry-----	20	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
78: Floodwood-----	75	Very limited Too steep Slow water movement	 1.00 0.50	Very limited Too steep Slow water movement	 1.00 0.37
79: Floodwood, warm-----	45	Very limited Too steep Filtering capacity Slow water movement Too acid	 1.00 1.00 0.50 0.50	Very limited Filtering capacity Too steep Too acid Slow water movement	 1.00 1.00 1.00 0.37
Keeler-----	40	Very limited Too steep Filtering capacity Slow water movement	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	 1.00 1.00 0.37
80: Floodwood-----	50	Very limited Too steep Slow water movement	 1.00 0.50	Very limited Too steep Slow water movement	 1.00 0.37
Keeler, warm-----	30	Very limited Too steep Filtering capacity Slow water movement	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	 1.00 1.00 0.37
81: Floodwood-----	50	Very limited Too steep Slow water movement	 1.00 0.50	Very limited Too steep Slow water movement	 1.00 0.37
Keeler, warm-----	30	Very limited Too steep Filtering capacity Slow water movement	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	 1.00 1.00 0.37

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
82: Flumecreek-----	85	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	 1.00 1.00 0.99	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	 1.00 1.00 1.00 0.99
83: Flumecreek-----	65	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	 1.00 1.00 0.99	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	 1.00 1.00 1.00 0.99
Stepoff-----	20	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep	 1.00 1.00 1.00
Dworshak, dry-----	15	Very limited Too steep Filtering capacity Slow water movement Too acid	 1.00 1.00 0.50 0.50	Very limited Filtering capacity Too steep Too acid Slow water movement	 1.00 1.00 1.00 0.37
84: Fordcreek-----	70	Very limited Too steep	 1.00	Very limited Low adsorption Too steep	 1.00 1.00
85: Fordcreek-----	80	Somewhat limited Slope	 0.16	Very limited Low adsorption Slope	 1.00 0.16
86: Garveson, high precipitation-----	55	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00 0.50	Very limited Filtering capacity Too steep Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00 1.00
Floodwood-----	30	Very limited Too steep Slow water movement	 1.00 0.50	Very limited Too steep Slow water movement	 1.00 0.37



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
87: Gramil-----	60	Very limited Slow water movement Ponding Depth to saturated zone Strongly contrasting textural stratification Runoff	 1.00  1.00 1.00  0.71   0.40	Very limited Slow water movement Ponding Depth to saturated zone Too acid Strongly contrasting textural stratification	 1.00  1.00 1.00  0.21 0.71   
Lewhand-----	30	Very limited Slow water movement Depth to saturated zone Too acid Flooding Runoff	 1.00  1.00  0.37 0.60 0.40	Very limited Slow water movement Depth to saturated zone Flooding Too acid	 1.00  1.00  1.00 0.96
88: Gramil-----	50	Very limited Slow water movement Ponding Depth to saturated zone Strongly contrasting textural stratification Runoff	 1.00  1.00 1.00  0.71   0.40	Very limited Slow water movement Ponding Depth to saturated zone Too acid Strongly contrasting textural stratification	 1.00  1.00 1.00  0.21 0.71   
Reggear-----	40	Very limited Filtering capacity Slow water movement Depth to saturated zone Leaching	 1.00 1.00  1.00  0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone	 1.00 1.00  1.00  
89: Grandad-----	85	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
90: Grandad, dry-----	70	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
90: Grandad-----	20	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
91: Grandad, dry-----	70	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
Grandad-----	20	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
92: Grandad-----	55	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
Rettig-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
93: Grandad, wet-----	60	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
Rettig, wet-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
94: Grandad, dry-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
Scand-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
95: Grangemont-----	60	Very limited Filtering capacity Slope Too acid	1.00 0.84 0.50	Very limited Filtering capacity Too acid Slope	1.00 1.00 0.84
Kauder-----	35	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope Leaching	1.00 1.00 1.00 0.84 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00 0.84
96: Grangemont, dry-----	50	Very limited Filtering capacity Slope Too acid	1.00 0.84 0.50	Very limited Filtering capacity Too acid Slope	1.00 1.00 0.84
Kauder, dry-----	40	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope Leaching	1.00 1.00 1.00 0.84 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00 0.84
97: Grangemont-----	60	Very limited Filtering capacity Slope Too acid	1.00 0.84 0.50	Very limited Filtering capacity Too acid Slope	1.00 1.00 0.84
Kauder, moist-----	30	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope Leaching	1.00 1.00 1.00 0.84 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00 0.84
98: Grangemont, wet-----	45	Very limited Filtering capacity Too steep Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too acid Too steep	1.00 1.00 1.00
Riswold-----	35	Very limited Filtering capacity Too steep Slow water movement	1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Slow water movement	1.00 1.00 1.00 0.37

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
99: Grasshopper-----	80	Very limited Depth to saturated zone Slow water movement Flooding Leaching	1.00 0.50 0.60 0.50	Very limited Depth to saturated zone Flooding Low adsorption Slow water movement	1.00 1.00 1.00 0.37
100: Gwin-----	45	Very limited Too steep Depth to bedrock Droughty Cobble content Runoff	1.00 1.00 1.00 0.59 0.40	Very limited Depth to bedrock Low adsorption Droughty Too steep Cobble content	1.00 1.00 1.00 1.00 0.59
Kettenbach-----	40	Very limited Too steep Droughty Slow water movement Depth to bedrock	1.00 0.92 0.50 0.06	Very limited Too steep Droughty Depth to bedrock Slow water movement	1.00 0.92 0.06 0.37
101: Gwin-----	45	Very limited Depth to bedrock Droughty Too steep Cobble content Runoff	1.00 1.00 1.00 0.59 0.40	Very limited Depth to bedrock Low adsorption Droughty Too steep Cobble content	1.00 1.00 1.00 1.00 0.59
Kettenbach-----	30	Very limited Too steep Droughty Slow water movement Depth to bedrock	1.00 0.92 0.50 0.06	Very limited Too steep Droughty Depth to bedrock Slow water movement	1.00 0.92 0.06 0.37
Keuterville-----	20	Very limited Filtering capacity Too steep Slow water movement	1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	1.00 1.00 0.37
102: Hildebrand-----	55	Somewhat limited Depth to saturated zone Too acid	0.78 0.22	Somewhat limited Too acid Depth to saturated zone	0.77 0.78
Spacecreek, dry-----	35	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 0.78 0.50	Very limited Filtering capacity Too acid Depth to saturated zone	1.00 1.00 0.78

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
103: Hubub, wet-----	75	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
104: Hubub, wet-----	65	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too acid	1.00
		Too acid	0.50	Too steep	1.00
Dworshak-----	30	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too acid	1.00
		Slow water movement	0.50	Too steep	1.00
		Too acid	0.50	Slow water movement	0.37
105: Hubub-----	65	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too acid	1.00
		Too acid	0.50	Too steep	1.00
Lostpete-----	20	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Low adsorption	1.00
		Too acid	0.50	Too acid	1.00
				Too steep	1.00
106: Hucberit-----	85	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
				Too steep	1.00
107: Hucberit-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
				Too steep	1.00
Vaywood, high precipitation-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly contrasting textural stratification	1.00	Too steep	1.00
		Too acid	0.50	Strongly contrasting textural stratification	1.00
				Too acid	1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
108: Hugus-----	85	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly	1.00	Too steep	1.00
		contrasting		Strongly	1.00
		textural		contrasting	
		stratification		textural	
		Slow water	0.50	stratification	
		movement		Too acid	1.00
		Too acid	0.50		
109: Hugus-----	90	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly	1.00	Too steep	1.00
		contrasting		Strongly	1.00
		textural		contrasting	
		stratification		textural	
		Slow water	0.50	stratification	
		movement		Too acid	1.00
		Too acid	0.50		
110: Hugus, moist-----	75	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly	1.00	Too steep	1.00
		contrasting		Strongly	1.00
		textural		contrasting	
		stratification		textural	
		Slow water	0.50	stratification	
		movement		Too acid	1.00
		Too acid	0.50		
111: Hugus, high precipitation-----	75	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Slow water	0.50	Too steep	1.00
		movement		Too acid	1.00
		Too acid	0.50	Slow water	0.37
				movement	
112: Hugus, moist-----	75	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly	1.00	Too steep	1.00
		contrasting		Strongly	1.00
		textural		contrasting	
		stratification		textural	
		Slow water	0.50	stratification	
		movement		Too acid	1.00
		Too acid	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
112: Hugus-----	15	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly	1.00	Too steep	1.00
		contrasting		Strongly	1.00
		textural		contrasting	
		stratification		textural	
		Slow water	0.50	stratification	
		movement		Too acid	1.00
		Too acid	0.50		
113: Hugus-----	60	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly	1.00	Too steep	1.00
		contrasting		Strongly	1.00
		textural		contrasting	
		stratification		textural	
		Slow water	0.50	stratification	
		movement		Too acid	1.00
		Too acid	0.50		
Dworshak-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
114: Itzee-----	90	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.04	Droughty	0.04
		Leaching	0.45		
115: Jacket-----	80	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Too steep	1.00	Too steep	1.00
116: Jacket-----	85	Very limited		Very limited	
		Slow water	1.00	Slow water	1.00
		movement		movement	
117: Jacket-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
117: Wellsbench-----	35	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Droughty	0.21	Droughty	0.21
118: Jacot-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
Garveson-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Strongly contrasting textural stratification	1.00	Strongly contrasting textural stratification	1.00
		Too acid	0.50	Too acid	1.00
119: Jacot-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
Garveson-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Strongly contrasting textural stratification	1.00	Strongly contrasting textural stratification	1.00
		Too acid	0.50	Too acid	1.00
120: Jaype-----	50	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Too steep	1.00	Too steep	1.00
		Runoff	0.40		
Revling-----	35	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too acid	1.00
		Slow water movement	0.50	Too steep	1.00
		Too acid	0.50	Slow water movement	0.37

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
121: Jaype, dry-----	65	Very limited Filtering capacity Slow water movement Too steep Runoff	1.00 1.00 1.00 0.40	Very limited Filtering capacity Slow water movement Too steep	1.00 1.00 1.00
Revling, dry-----	15	Very limited Filtering capacity Too steep Slow water movement Too acid	1.00 1.00 0.50 0.50	Very limited Filtering capacity Too acid Too steep Slow water movement	1.00 1.00 1.00 0.37
122: Jaype-----	50	Very limited Filtering capacity Slow water movement Too steep Runoff	1.00 1.00 1.00 0.40	Very limited Filtering capacity Slow water movement Too steep	1.00 1.00 1.00
Statemeadow-----	25	Very limited Filtering capacity Too steep Slow water movement Too acid	1.00 1.00 0.50 0.50	Very limited Filtering capacity Too acid Too steep Slow water movement	1.00 1.00 1.00 0.37
123: Joel-----	50	Very limited Filtering capacity Slope Slow water movement	1.00 0.84 0.50	Very limited Filtering capacity Slope Slow water movement	1.00 0.84 0.37
Setters-----	30	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope Too acid	1.00 1.00 1.00 0.84 0.50	Very limited Filtering capacity Depth to saturated zone Slow water movement Too acid Slope	1.00 1.00 1.00 1.00 0.84
124: Johnson-----	75	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	1.00 1.00 1.00
125: Johnson-----	55	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
125: Swayne-----	25	Very limited Too steep Filtering capacity Slow water movement Strongly contrasting textural stratification	 1.00 1.00 1.00  0.97	Very limited Filtering capacity Too steep Slow water movement Strongly contrasting textural stratification	 1.00 1.00 1.00  0.97
126: Johnson-----	45	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Swayne-----	40	Very limited Too steep Filtering capacity Slow water movement Strongly contrasting textural stratification	 1.00 1.00 1.00  0.97	Very limited Filtering capacity Too steep Slow water movement Strongly contrasting textural stratification	 1.00 1.00 1.00  0.97
127: Johnson-----	50	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Texascreek-----	35	Very limited Too steep Filtering capacity Depth to bedrock Droughty	 1.00 1.00 0.20 0.19	Very limited Filtering capacity Low adsorption Too steep Depth to bedrock Droughty	 1.00 1.00 1.00 0.20 0.19
128: Jury-----	80	Very limited Filtering capacity Too steep	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
129: Jury-----	85	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
130: Jury, cold-----	90	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
131: Jury-----	55	Very limited Too steep Filtering capacity	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Weitas-----	35	Very limited Too steep Filtering capacity Too acid	1.00 1.00 0.32	Very limited Filtering capacity Low adsorption Too steep Too acid	1.00 1.00 1.00 0.91
132: Jury-----	60	Very limited Filtering capacity Too steep	1.00 1.00	Very limited Filtering capacity Too steep	1.00 1.00
Weitas-----	30	Very limited Filtering capacity Too steep Too acid	1.00 1.00 0.32	Very limited Filtering capacity Low adsorption Too steep Too acid	1.00 1.00 1.00 0.91
133: Kauder-----	80	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope Leaching	1.00 1.00 1.00 0.84 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00 0.84
134: Keeler, dry-----	50	Very limited Too steep Filtering capacity Slow water movement	1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	1.00 1.00 0.37
Keeler-----	30	Very limited Too steep Filtering capacity Slow water movement	1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	1.00 1.00 0.37
135: Keeler, moist-----	65	Very limited Too steep Filtering capacity Slow water movement	1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	1.00 1.00 0.37
Keeler-----	20	Very limited Too steep Filtering capacity Slow water movement	1.00 1.00 0.50	Very limited Filtering capacity Too steep Slow water movement	1.00 1.00 0.37

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
136:					
Keeler-----	55	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
Aldermand-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
137:					
Keeler-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
Jacot-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
138:					
Keeler-----	55	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
Lado-----	20	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too steep	1.00
139:					
Kettenbach-----	40	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Droughty	0.92	Droughty	0.92
		Slow water	0.50	Depth to bedrock	0.06
		movement		Slow water	0.37
		Depth to bedrock	0.06	movement	
Gwin-----	35	Very limited		Very limited	
		Too steep	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Low adsorption	1.00
		Droughty	1.00	Droughty	1.00
		Cobble content	0.59	Too steep	1.00
		Runoff	0.40	Cobble content	0.59
Rock outcrop-----	15	Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
140: Kettenbach-----	45	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Droughty	0.92	Droughty	0.92
		Slow water	0.50	Depth to bedrock	0.06
		movement		Slow water	0.37
		Depth to bedrock	0.06	movement	
Keuterville-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
141: Keuterville-----	80	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
142: Keuterville-----	65	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
143: Keuterville-----	65	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Slow water	0.41	Slow water	0.31
		movement		movement	
		Droughty	0.06	Droughty	0.06
Rock outcrop-----	20	Not rated		Not rated	
144: Klickson-----	85	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Too acid	0.50	Too acid	1.00
		Strongly	0.10	Strongly	0.10
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
145: Klickson-----	70	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Too acid	0.50	Too acid	1.00
		Strongly	0.10	Strongly	0.10
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
146: Klickson-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Too acid	0.50	Too acid	1.00
		Strongly	0.10	Strongly	0.10
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
Agatha-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
147: Klickson-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Too acid	0.50	Too acid	1.00
Kettenbach-----	30	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Droughty	0.92	Droughty	0.92
		Slow water	0.50	Depth to bedrock	0.06
		movement		Slow water	0.37
		Depth to bedrock	0.06	movement	
148: Klickson-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Too acid	0.50	Too acid	1.00
		Strongly	0.10	Strongly	0.10
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
Rock outcrop-----	20	Not rated		Not rated	



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
148: Kettenbach-----	15	Very limited		Very limited	
		Too steep	1.00	Too steep	1.00
		Droughty	0.92	Droughty	0.92
		Slow water	0.50	Depth to bedrock	0.06
		movement		Slow water	0.37
		Depth to bedrock	0.06	movement	
149: Konkol-----	45	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too steep	1.00
		Too acid	0.43	Too acid	0.99
Revling-----	25	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too acid	1.00
		Slow water	0.50	Too steep	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
150: Kooskia-----	80	Very limited		Very limited	
		Slow water	1.00	Depth to saturated	1.00
		movement		zone	
		Depth to saturated	1.00	Strongly	1.00
		zone		contrasting	
		Strongly	1.00	textural	
		contrasting		stratification	
		textural		Slow water	1.00
		stratification		movement	
		Too steep	1.00	Too steep	1.00
		Leaching	0.50		
151: Kooskia-----	80	Very limited		Very limited	
		Slow water	1.00	Depth to saturated	1.00
		movement		zone	
		Depth to saturated	1.00	Strongly	1.00
		zone		contrasting	
		Strongly	1.00	textural	
		contrasting		stratification	
		textural		Slow water	1.00
		stratification		movement	
		Leaching	0.50		
152: Kruse-----	85	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.41	Too acid	1.00
		movement		Slow water	0.31
		Too acid	0.50	movement	

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
153: Kruse-----	75	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
154: Kruse-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
Aldermand-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
155: Kruse-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
Aldermand-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
156: Kruse-----	55	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
McCrosket, dry-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Droughty	0.02	Droughty	0.02
157: Kruse-----	70	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
157: Noil-----	20	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Droughty	0.29	Too steep	1.00
		Too acid	0.50	Too acid	1.00
				Droughty	0.29
158: Kruse-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
Teakean-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Slow water	1.00
		Slow water	1.00	movement	
		movement		Depth to saturated	1.00
		Depth to saturated	1.00	zone	
		zone		Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
159: Larkin-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Slow water	0.37
		movement		movement	
Driscoll-----	35	Very limited		Very limited	
		Too steep	1.00	Depth to saturated	1.00
		Slow water	1.00	zone	
		movement		Too steep	1.00
		Depth to saturated	1.00	Slow water	1.00
		zone		movement	
		Strongly	0.90	Strongly	0.90
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
		Leaching	0.50	Too acid	0.14
160: Lebaron-----	45	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Depth to saturated	1.00
		movement		zone	
		Depth to saturated	1.00	Slow water	1.00
		zone		movement	
		Leaching	0.50	Flooding	0.40

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
160: Latahco-----	40	Very limited Filtering capacity Depth to saturated zone Slow water movement Flooding Leaching	 1.00 1.00  0.41 0.60 0.50	Very limited Filtering capacity Depth to saturated zone Flooding Slow water movement	 1.00 1.00  1.00 0.31
161: Lewhand-----	65	Very limited Slow water movement Depth to saturated zone Too acid Flooding Runoff	 1.00  1.00  0.37 0.60 0.40	Very limited Slow water movement Depth to saturated zone Flooding Too acid	 1.00  1.00  1.00 0.96
Burntcreek-----	20	Very limited Depth to saturated zone Leaching Flooding Too acid	 1.00  0.70 0.60 0.11	Very limited Depth to saturated zone Flooding Too acid	 1.00  1.00 0.42
162: Lewhand-----	80	Very limited Slow water movement Depth to saturated zone Too acid Flooding Runoff	 1.00  1.00  0.37 0.60 0.40	Very limited Slow water movement Depth to saturated zone Flooding Too acid	 1.00  1.00  1.00 0.96
Teneb-----	15	Very limited Depth to saturated zone Flooding Slow water movement Leaching Too acid	 1.00  1.00 0.50 0.50 0.11	Very limited Depth to saturated zone Flooding Too acid Slow water movement	 1.00  1.00 0.42 0.37
163: Longbar-----	55	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep	 1.00 1.00 1.00
Bigtalk-----	35	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
164: Longbar-----	55	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep	 1.00 1.00 1.00
Bigtalk-----	35	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
165: Longpen-----	75	Very limited Too steep Filtering capacity Slow water movement	 1.00 1.00 1.00	Very limited Filtering capacity Too steep Slow water movement	 1.00 1.00 1.00
166: Longpen-----	60	Very limited Filtering capacity Slow water movement Slope	 1.00 1.00  0.84	Very limited Filtering capacity Slow water movement Slope	 1.00 1.00  0.84
167: Meland-----	50	Somewhat limited Slope Slow water movement Depth to bedrock Too acid	 0.84 0.41  0.10 0.03	Very limited Low adsorption Slope Depth to bedrock Slow water movement Too acid	 1.00 0.84 0.10 0.31  0.14
Jacket-----	40	Very limited Slow water movement Slope	 1.00  0.84	Very limited Slow water movement Slope	 1.00  0.84
168: Meland-----	55	Very limited Too steep Slow water movement Depth to bedrock Too acid	 1.00 0.41  0.10 0.03	Very limited Low adsorption Too steep Depth to bedrock Slow water movement Too acid	 1.00 1.00 0.10 0.31  0.14
Keuterville-----	30	Very limited Too steep Slow water movement Droughty	 1.00 0.41  0.06	Very limited Too steep Slow water movement Droughty	 1.00 0.31  0.06
169: Mushel-----	60	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
169: Brodeer-----	30	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
170: Mushel-----	50	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Dullaxe-----	45	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
171: Nakarna, high precipitation-----	75	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
172: Nakarna, high precipitation-----	75	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
173: Nakarna-----	45	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Nakarna, warm-----	35	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
174: Narnett-----	60	Very limited Too steep Slow water movement Too acid	 1.00 0.50  0.03	Very limited Too steep Slow water movement Too acid	 1.00 0.37  0.14
Jury-----	20	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
175: Neva-----	80	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
176: Newlig-----	85	Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84
		Too acid	0.02	Too acid	0.07
177: Noil-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Droughty	0.29	Too steep	1.00
		Too acid	0.50	Too acid	1.00
				Droughty	0.29
Keeler-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water movement	0.50	Slow water movement	0.37
178: Noil-----	70	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Droughty	0.29	Too steep	1.00
		Too acid	0.50	Too acid	1.00
				Droughty	0.29
Bouldercreek, warm--	15	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
Rock outcrop-----	15	Not rated		Not rated	
179: Norwidge, moist----	50	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Too steep	1.00	Too acid	1.00
		Slow water movement	0.89	Too steep	1.00
		Too acid	0.50	Slow water movement	0.78
Threebear, moist----	45	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep	1.00	Too steep	1.00
		Leaching	0.70		



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
180: Odonnell-----	65	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep Leaching	 1.00 1.00  1.00  1.00 0.50	Very limited Filtering capacity Depth to saturated zone Slow water movement Too steep	 1.00 1.00  1.00  1.00
Grandad-----	15	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
181: Odonnell-----	75	Very limited Too steep Filtering capacity Slow water movement Depth to saturated zone Leaching	 1.00 1.00 1.00  1.00  0.50	Very limited Filtering capacity Depth to saturated zone Too steep Slow water movement	 1.00 1.00  1.00 1.00
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Depth to saturated zone Leaching Flooding Too acid	 1.00  0.90 0.60 0.18	Very limited Depth to saturated zone Flooding Too acid	 1.00  1.00 0.67
Itzee-----	15	Very limited Filtering capacity Droughty Leaching	 1.00 0.04 0.45	Very limited Filtering capacity Droughty	 1.00 0.04
183: Pits, quarry-----	100	Not rated		Not rated	
184: Placer-----	40	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Dowper-----	30	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
184: Grangemont-----	15	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
185: Poorman, dry-----	70	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
186: Poorman, dry-----	60	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Poorman-----	30	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
187: Poorman-----	55	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Grandad-----	35	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
188: Poorman-----	50	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Grandad-----	40	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
189: Poorman-----	75	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
189: Grandad, dry-----	20	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
190: Poorman-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
Grandad, dry-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
191: Reggear-----	55	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slope	0.84	Slope	0.84
		Leaching	0.50		
Kauder-----	25	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slope	0.84	Slope	0.84
		Leaching	0.50		
192: Reggear-----	50	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Slope	0.16	Slope	0.16
		Leaching	0.50		
Seddow-----	30	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slope	0.16	Slope	0.16
193: Rettig, high elevation-----	80	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
194: Rettig-----	80	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
195: Rettig, cold-----	90	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
196: Rettig, cool-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
Rettig, dry-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
197: Rettig-----	45	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
Grandad-----	30	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Too acid	0.50	Too steep	1.00
				Too acid	1.00
198: Rettig, warm, dry---	60	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00
Township-----	25	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Low adsorption	1.00
		Strongly contrasting	1.00	Too steep	1.00
		textural		Strongly	1.00
		stratification		contrasting	
		Too acid	0.50	textural	
				stratification	
				Too acid	1.00
199: Rettig-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Too acid	0.50	Too acid	1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
199: Township, wet-----	25	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00   0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00 1.00   1.00
Stepoff-----	15	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Low adsorption Too steep	 1.00 1.00 1.00
200: Riswold-----	50	Very limited Filtering capacity Too steep Slow water movement Too acid	 1.00 1.00 0.50  0.50	Very limited Filtering capacity Low adsorption Too acid Too steep Slow water movement	 1.00 1.00 1.00 1.00 0.37
Cranberry-----	45	Very limited Filtering capacity Slow water movement Slope Too acid	 1.00 0.81  0.16 0.50	Very limited Filtering capacity Low adsorption Too acid Slope Slow water movement	 1.00 1.00 1.00 0.16 0.68
201: Riswold-----	45	Very limited Too steep Filtering capacity Slow water movement Too acid	 1.00 1.00 0.50  0.50	Very limited Filtering capacity Low adsorption Too steep Too acid Slow water movement	 1.00 1.00 1.00 1.00 0.37
Grangemont-----	40	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
202: Rock outcrop-----	35	Not rated		Not rated	
Whiskeycreek-----	30	Very limited Too steep Filtering capacity Depth to bedrock Droughty Runoff	 1.00 1.00 1.00 1.00 0.40	Very limited Filtering capacity Depth to bedrock Low adsorption Droughty Too steep	 1.00 1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
202: Texascreek, dry-----	25	Very limited Too steep Filtering capacity Depth to bedrock Droughty	 1.00 1.00 0.20 0.19	Very limited Filtering capacity Low adsorption Too steep Depth to bedrock Droughty	 1.00 1.00 1.00 0.20 0.19
203: Scaler-----	85	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
204: Scaler-----	60	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Grandad-----	20	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
205: Scaler-----	60	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
Grangemont-----	30	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
206: Scand-----	65	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Scaler-----	15	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
207: Seddow-----	75	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
208: Seddow-----	85	Very limited Too steep Filtering capacity	 1.00 1.00	Very limited Filtering capacity Too steep	 1.00 1.00
209: Seddow-----	80	Very limited Filtering capacity Slope	 1.00 0.16	Very limited Filtering capacity Slope	 1.00 0.16
210: Setters-----	80	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Leaching	 1.00 1.00  1.00  0.50 0.50	Very limited Filtering capacity Depth to saturated zone Slow water movement Too acid Strongly contrasting textural stratification	 1.00 1.00  1.00  1.00 0.15
211: Shattuck-----	90	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Slow water movement Too acid	 1.00 1.00 1.00   0.41 0.50	Very limited Filtering capacity Too steep Strongly contrasting textural stratification Too acid Slow water movement	 1.00 1.00 1.00   1.00 0.31
212: Shattuck-----	90	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Slow water movement Too acid	 1.00 1.00 1.00   0.41 0.50	Very limited Filtering capacity Too steep Strongly contrasting textural stratification Too acid Slow water movement	 1.00 1.00 1.00   1.00 0.31
213: Shattuck, moist-----	90	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Slow water movement Too acid	 1.00 1.00 1.00   0.41 0.50	Very limited Filtering capacity Too steep Strongly contrasting textural stratification Too acid Slow water movement	 1.00 1.00 1.00   1.00 0.31



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
214: Shattuck, moist-----	50	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Strongly	1.00	Strongly	1.00
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
		Slow water	0.41	Too acid	1.00
		movement		Slow water	0.31
		Too acid	0.50	movement	
Dworshak, moist-----	40	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
215: Shattuck-----	60	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Strongly	1.00	Strongly	1.00
		contrasting		contrasting	
		textural		textural	
		stratification		stratification	
		Slow water	0.41	Too acid	1.00
		movement		Slow water	0.31
		Too acid	0.50	movement	
Dworshak-----	35	Very limited		Very limited	
		Too steep	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Too steep	1.00
		Slow water	0.50	Too acid	1.00
		movement		Slow water	0.37
		Too acid	0.50	movement	
216: Sly-----	80	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Slow water	0.30	Slope	0.16
		movement		Slow water	0.22
		Slope	0.16	movement	
Wilkins-----	15	Very limited		Very limited	
		Slow water	1.00	Slow water	1.00
		movement		movement	
		Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone	
		Strongly	1.00	Flooding	1.00
		contrasting		Strongly	1.00
		textural		contrasting	
		stratification		textural	
		Flooding	0.60	stratification	
		Runoff	0.40		

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
217: Southwick-----	85	Very limited Filtering capacity Slow water movement Depth to saturated zone Leaching	1.00 1.00 1.00 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone	1.00 1.00 1.00
218: Southwick-----	45	Very limited Slow water movement Depth to saturated zone Too steep Leaching	1.00 1.00 1.00 0.50	Very limited Slow water movement Depth to saturated zone Low adsorption Too steep	1.00 1.00 1.00 1.00
Larkin-----	40	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.31
219: Statemeadow-----	65	Very limited Filtering capacity Slow water movement Slope Too acid	1.00 0.50 0.16 0.50	Very limited Filtering capacity Too acid Slope Slow water movement	1.00 1.00 0.16 0.37
Reggear-----	25	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope Leaching	1.00 1.00 1.00 0.16 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00 0.16
220: Swayne-----	85	Very limited Filtering capacity Slow water movement Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 0.97	Very limited Filtering capacity Slow water movement Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 0.97
221: Taney-----	80	Very limited Slow water movement Depth to saturated zone Leaching Too acid	1.00 1.00 1.00 0.50 0.02	Very limited Slow water movement Depth to saturated zone Too acid	1.00 1.00 1.00 0.07

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
222: Taney-----	50	Very limited Slow water movement Too steep Depth to saturated zone Too acid	 1.00  1.00 0.95  0.11	Very limited Slow water movement Too steep Too acid Depth to saturated zone	 1.00  1.00 0.42 0.95  
Joel-----	35	Very limited Too steep Slow water movement	 1.00 0.41 	Very limited Too steep Slow water movement	 1.00 0.31 
223: Taney-----	65	Very limited Too steep Slow water movement Depth to saturated zone Leaching Too acid	 1.00 1.00  1.00  0.50 0.02	Very limited Slow water movement Depth to saturated zone Too steep Too acid	 1.00  1.00  1.00 0.07 
McCrosket-----	25	Very limited Too steep Filtering capacity Droughty	 1.00 1.00 0.02	Very limited Filtering capacity Too steep Droughty	 1.00 1.00 0.02 
224: Taney-----	55	Very limited Slow water movement Depth to saturated zone Leaching Too acid	 1.00  1.00  0.50 0.02	Very limited Slow water movement Depth to saturated zone Too acid	 1.00  1.00  0.07 
Setters-----	35	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Leaching	 1.00 1.00  1.00  0.50 0.50	Very limited Filtering capacity Depth to saturated zone Slow water movement Too acid Strongly contrasting textural stratification	 1.00 1.00  1.00  1.00 0.15   
225: Taney-----	40	Very limited Slow water movement Depth to saturated zone Slope Leaching Too acid	 1.00  1.00  0.96 0.50 0.02	Very limited Slow water movement Depth to saturated zone Slope Too acid	 1.00  1.00  0.96 0.07 

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
225: Setters-----	40	Very limited Filtering capacity Slow water movement Depth to saturated zone Slope Too acid	1.00 1.00 1.00 0.96 0.50	Very limited Filtering capacity Depth to saturated zone Slow water movement Too acid Slope	1.00 1.00 1.00 1.00 0.96
226: Teakean-----	80	Very limited Too steep Filtering capacity Slow water movement Depth to saturated zone Too acid	1.00 1.00 1.00 1.00 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone Low adsorption Too steep	1.00 1.00 1.00 1.00 1.00
227: Teneb-----	85	Very limited Depth to saturated zone Flooding Slow water movement Leaching Too acid	1.00 1.00 0.50 0.50 0.11	Very limited Depth to saturated zone Flooding Too acid Slow water movement	1.00 1.00 0.42 0.37
228: Texascreek-----	55	Very limited Too steep Filtering capacity Depth to bedrock Droughty	1.00 1.00 0.20 0.19	Very limited Filtering capacity Low adsorption Too steep Depth to bedrock Droughty	1.00 1.00 1.00 0.20 0.19
Rock outcrop-----	25	Not rated		Not rated	
229: Texascreek, dry-----	45	Very limited Too steep Filtering capacity Depth to bedrock Droughty	1.00 1.00 0.20 0.19	Very limited Filtering capacity Low adsorption Too steep Depth to bedrock Droughty	1.00 1.00 1.00 0.20 0.19
Whiskeycreek-----	35	Very limited Too steep Filtering capacity Depth to bedrock Droughty Runoff	1.00 1.00 1.00 1.00 0.40	Very limited Filtering capacity Depth to bedrock Low adsorption Droughty Too steep	1.00 1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
230: Norwidge-----	45	Very limited Filtering capacity Too steep Slow water movement Too acid	 1.00 1.00 0.89  0.50	Very limited Filtering capacity Too acid Too steep Slow water movement	 1.00 1.00 1.00 0.78  
Threebear-----	45	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep Too acid	 1.00 1.00  1.00  1.00 0.50	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Too steep	 1.00 1.00  1.00  1.00 1.00
231: Tomodo-----	80	Very limited Too steep Filtering capacity Slow water movement Too acid	 1.00 1.00 1.00  0.50	Very limited Filtering capacity Slow water movement Too steep Too acid	 1.00 1.00  1.00 1.00
232: Tomodo-----	60	Very limited Too steep Filtering capacity Slow water movement Too acid	 1.00 1.00 1.00  0.50	Very limited Filtering capacity Slow water movement Too steep Too acid	 1.00 1.00  1.00 1.00
Lado-----	15	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
233: Township-----	55	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00   0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00 1.00   1.00
Rettig-----	25	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
234: Township-----	65	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00    0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00 1.00    1.00
Rettig-----	25	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
235: Township, dry-----	45	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00    0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	 1.00 1.00 1.00 1.00    1.00
Rettig, low precipitation-----	25	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00
Nakarna, dry-----	20	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Too acid	 1.00 1.00 1.00 1.00
236: Trappercreek-----	50	Very limited Filtering capacity Slow water movement Slope	 1.00 0.50  0.16	Very limited Filtering capacity Low adsorption Slope Slow water movement	 1.00 1.00 0.16 0.37
Narnett-----	35	Somewhat limited Slow water movement Slope Too acid	 0.50  0.16 0.03	Somewhat limited Slope Slow water movement Too acid	 0.16 0.37  0.14
237: Uvi-----	65	Very limited Too steep Filtering capacity Too acid	 1.00 1.00 0.50	Very limited Filtering capacity Too steep Too acid	 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
238: Uvi-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00
239: Vaywood, high precipitation-----	60	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 1.00 1.00
Vaywood, dry-----	30	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 1.00 1.00
240: Vaywood-----	85	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 1.00 1.00
241: Vaywood-----	65	Very limited Too steep Filtering capacity Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 0.50	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification Too acid	1.00 1.00 1.00 1.00 1.00
Handoff-----	20	Very limited Too steep Filtering capacity Strongly contrasting textural stratification	1.00 1.00 0.46	Very limited Filtering capacity Low adsorption Too steep Strongly contrasting textural stratification	1.00 1.00 1.00 0.46



# Soil Survey of Clearwater Area, Idaho

Table 9.—Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Very limited Slow water movement Droughty	1.00 0.21	Very limited Slow water movement Droughty	1.00 0.21
244: Wellsbench-----	50	Very limited Too steep Slow water movement Droughty	1.00 1.00 0.21	Very limited Too steep Slow water movement Droughty	1.00 1.00 0.21
Lacy-----	30	Very limited Too steep Filtering capacity Depth to bedrock Droughty Slow water movement	1.00 1.00 1.00 1.00 0.50	Very limited Filtering capacity Depth to bedrock Low adsorption Droughty Too steep	1.00 1.00 1.00 1.00 1.00
245: Wilkins-----	85	Very limited Slow water movement Depth to saturated zone Strongly contrasting textural stratification Flooding Runoff	1.00 1.00 1.00 0.60 0.40	Very limited Slow water movement Depth to saturated zone Flooding Strongly contrasting textural stratification	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

**Table 10.**—Agricultural Disposal of Wastewater by Irrigation and Overland Flow

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Cobble content	0.90
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Cobble content	0.90
3: Agatha-----	75	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Cobble content	0.90
4: Ahsahka-----	45	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	0.67	Too acid	0.01
		Too acid	0.01		
Fordcreek-----	40	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
				Depth to bedrock	0.98

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation	Overland flow of wastewater		
		Rating class and limiting features	Value	Rating class and limiting features	Value
5: Ahsahka-----	50	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 0.67 0.01	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.01
Whiskeycreek-----	30	Very limited Filtering capacity Depth to bedrock Droughty Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
6: Aldermant-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
7: Aldermant-----	90	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
8: Aldermant, dry-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9: Aquandic Cryaquepts	90	Very limited Depth to saturated zone Flooding Too acid	1.00 1.00 0.96	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.96
10: Aquandic Endoaquepts	60	Very limited Depth to saturated zone Too acid Slow water movement Flooding	1.00 0.96 0.37 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.96
Aquandic Dystrudepts	20	Very limited Filtering capacity Depth to saturated zone Too acid Slow water movement Flooding	1.00 1.00 1.00 0.43 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid Cobble content	1.00 1.00 1.00 1.00 0.25
11: Bandmill, dry-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Grangemont-----	30	Very limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler application	1.00 1.00 1.00 0.90	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Bargamin-----	25	Very limited Filtering capacity Too steep for surface application Slow water movement Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12: Bandmill-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.78	Very limited Seepage Too steep for surface application	1.00 1.00
Riswold-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.78 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
13: Berthahill, moist---	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Handoff-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
14: Berthahill-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Handoff-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
15: Berthahill-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Shattuck-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.31	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
16: Bigtalk, cool-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Bigtalk, wet-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
17: Bigtalk-----	80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
18: Bigtalk, cool-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
18: Floodwood, cool-----	40	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
		Slow water movement	0.37		
19: Bigtalk, cool-----	75	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
Keeler, cool-----	20	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		
20: Bouldercreek, moist	85	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
21: Bouldercreek-----	75	Very limited Too steep for surface application	1.00	Very limited Seepage Too steep for surface application	1.00 1.00
		Too steep for sprinkler application	1.00	Stone content	0.04
		Droughty	0.20	Cobble content	0.07



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
22: Bouldercreek-----	75	Very limited Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00 0.20	Very limited Seepage Too steep for surface application Stone content Cobble content	1.00 1.00 0.04 0.07
23: Bouldercreek, moist	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Brodeer-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
24: Bouldercreek-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Brodeer-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
25: Bouldercreek-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25: Judgetown-----	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	0.26
26: Bouldercreek, high precipitation-----	50	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.20	Stone content	0.04
				Cobble content	0.07
Marblecreek-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Cobble content	0.02
		Droughty	0.16		
27: Bouldercreek, cool, dry-----	70	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
Rettig, cool-----	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
28: Brequito, dry-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
29: Brequito-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grangemont-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
30: Brequito-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Lado, dry-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
31: Brequito-----	60	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for surface application	1.00	Too steep for surface application	0.78
		Too steep for sprinkler application	0.40		
Lado, dry-----	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	0.78
		Too steep for sprinkler application	0.40		
32: Brequito-----	50	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
Mushel-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
33: Brequito-----	50	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
33: Mushel-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
34: Brodeer, dry-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Brodeer-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
35: Brodeer-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Mushel-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
36: Brodeer, warm-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
36: Mushel, dry-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
37: Brodeer-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Bouldercreek-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
38: Brodeer-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Flewsie, dry-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
39: Brodeer-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Lostpete-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
40: Brodeer, moist-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Lostpete, moist-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
41: Brodeer, dry-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Mushel-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
42: Brodeer-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00  1.00 1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00  1.00
Mushel-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00  1.00 1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00  1.00
43: Burntcreek-----	80	Very limited Depth to saturated zone Too acid Flooding	 1.00  0.42 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid	 1.00 1.00  1.00 0.42
44: Campra-----	80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	 1.00 1.00  1.00 1.00	Very limited Seepage Too steep for surface application	 1.00 1.00
45: Campra-----	45	Very limited Filtering capacity Too steep for surface application Slow water movement Too steep for sprinkler application	 1.00 1.00  1.00 1.00	Very limited Seepage Too steep for surface application	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
45: Sly-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.22	Very limited Seepage Too steep for surface application	1.00 1.00
46: Carlinton-----	80	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	1.00 1.00 1.00 1.00
47: Carlinton-----	85	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 1.00
48: Carlinton-----	50	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 0.78

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
48: Kruse-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		
49: Carlinton-----	55	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Too acid	1.00	Too steep for surface application	0.50
		Too steep for surface application	1.00		
Seddow-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	0.88
		Too steep for sprinkler application	0.22	Too steep for surface application	0.50
50: Caseycreek-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to saturated zone	0.95	Depth to saturated zone	0.95
51: Cavendish-----	75	Somewhat limited Too steep for surface application	0.32	Very limited Seepage	1.00
		Slow water movement	0.37	Depth to bedrock	0.94
52: Cavendish-----	45	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	0.98	Too steep for surface application	1.00
		Slow water movement	0.37	Depth to bedrock	0.94

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52: Taney-----	40	Very limited Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application Too acid	 1.00  1.00  1.00  0.98  0.07	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	 1.00 1.00  1.00   0.07
53: Cobbler-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00  1.00  1.00 1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00  1.00
Aldermand-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00  1.00  1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00  1.00
54: Cobbler-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00  1.00  1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00  1.00
Noil-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	 1.00 1.00  1.00  1.00 0.29	Very limited Seepage Too steep for surface application Too acid Depth to bedrock Cobble content	 1.00 1.00  1.00 0.94 0.57

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
55: Cranberry-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.68	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Riswold-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
56: Crumarine-----	95	Very limited Filtering capacity Depth to saturated zone Too acid Droughty	1.00 1.00 0.77 0.10	Very limited Seepage Depth to saturated zone Too acid Flooding	1.00 1.00 0.77 0.40
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Very limited Depth to saturated zone Slow water movement Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.10 0.14	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	1.00 1.00 0.22 0.14

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
59: Driscoll-----	45	Very limited Depth to saturated zone Too steep for surface application Slow water movement Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 1.00 0.14	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	1.00 1.00 1.00 0.14
Larkin-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
60: Dullaxe, high elevation-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Dullaxe-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
61: Dullaxe, dry-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
61: Dullaxe, wet-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
62: Dullaxe-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Brodeer-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
63: Dullaxe-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Brodeer-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
64: Dullaxe-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
64: Judgetown-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application Depth to bedrock	1.00 1.00 0.26
65: Dullaxe-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Judgetown, moist----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application Depth to bedrock	1.00 1.00 0.26
66: Dullaxe-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Jury, moist-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
67: Dumps, wood slash---	100	Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68: Dworshak-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
69: Dworshak-----	80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Brequito-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
70: Elkberry-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.22	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Elkberry, wet-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.22	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
71: Elkberry-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.22	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Dworshak-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
72: Elkridge-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.02
Riswold-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
73: Elkridge-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.02

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
73: Riswold-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
		Slow water movement	0.37		
74: Fico, dry-----	55	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	0.05
Hucherit, warm-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
75: Fico-----	50	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	0.05
Weitas-----	40	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.91
		Too acid	0.91		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
76: Flewsie, high precipitation-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
77: Flewsie, low precipitation-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Flewsie, dry-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
78: Floodwood-----	75	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
79: Floodwood, warm-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
79: Keeler-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
80: Floodwood-----	50	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
Keeler, warm-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
81: Floodwood-----	50	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
Keeler, warm-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
82: Flumecreek-----	85	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	0.09
83: Flumecreek-----	65	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	0.09
Stepoff-----	20	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
Dworshak, dry-----	15	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
		Slow water movement	0.37		
84: Fordcreek-----	70	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
				Depth to bedrock	0.98
85: Fordcreek-----	80	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	0.40	Depth to bedrock	0.98
				Too steep for surface application	0.78



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
86: Garveson, high precipitation-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Floodwood-----	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
87: Gramil-----	60	Very limited Slow water movement Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.21	Very limited Seepage Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.21
Lewhand-----	30	Very limited Slow water movement Depth to saturated zone Too acid Flooding	1.00 1.00 1.00 0.96 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.96
88: Gramil-----	50	Very limited Slow water movement Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 1.00 0.21	Very limited Seepage Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.21
Reggear-----	40	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application	1.00 1.00 1.00 0.02	Very limited Seepage Depth to saturated zone	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
89: Grandad-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
90: Grandad, dry-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
91: Grandad, dry-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation	Overland flow of wastewater		
		Rating class and limiting features	Value	Rating class and limiting features	Value
92: Grandad-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Rettig-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
93: Grandad, wet-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Rettig, wet-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
94: Grandad, dry-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
94: Scand-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
95: Grangemont-----	60	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 0.90	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 1.00
Kauder-----	35	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 0.90	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 1.00
96: Grangemont, dry-----	50	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 0.90	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 1.00
Kauder, dry-----	40	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 0.90	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97: Grangemont-----	60	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	0.90		
Kauder, moist-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00		
		Too steep for sprinkler application	0.90		
98: Grangemont, wet-----	45	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	1.00		
Riswold-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		
99: Grasshopper-----	80	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Slow water movement	0.37	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100: Gwin-----	45	Very limited Depth to bedrock Droughty Too steep for surface application Too steep for sprinkler application Cobble content	 1.00 1.00 1.00  1.00  0.59	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	 1.00 1.00 1.00  0.78
Kettenbach-----	40	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Slow water movement	 1.00  1.00  0.92 0.06 0.37	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	 1.00 1.00 1.00  0.99
101: Gwin-----	45	Very limited Depth to bedrock Droughty Too steep for surface application Too steep for sprinkler application Cobble content	 1.00 1.00 1.00  1.00  0.59	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	 1.00 1.00 1.00  0.78
Kettenbach-----	30	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Slow water movement	 1.00  1.00  0.92 0.06 0.37	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	 1.00 1.00 1.00  0.99
Keuterville-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	 1.00 1.00  1.00  0.37	Very limited Seepage Too steep for surface application	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
102: Hildebrand-----	55	Somewhat limited Too steep for surface application Too acid Depth to saturated zone	0.32   0.77 0.78	Very limited Seepage Too acid Depth to saturated zone	1.00  0.77 0.78
Spacecreek, dry-----	35	Very limited Filtering capacity Too acid Too steep for surface application Depth to saturated zone	1.00 1.00 0.32  0.78	Very limited Seepage Too acid Depth to saturated zone	1.00 1.00 0.78
103: Hubub, wet-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00    1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00   1.00
104: Hubub, wet-----	65	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00  1.00	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 1.00
Dworshak-----	30	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00  1.00  0.37	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
105: Hubub-----	65	Very limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Lostpete-----	20	Very limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
106: Hucberit-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
107: Hucberit-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Vaywood, high precipitation-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.01

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
108: Hugus-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
109: Hugus-----	90	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
110: Hugus, moist-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
111: Hugus, high precipitation-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
112: Hugus, moist-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Hugus-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
113: Hugus-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Dworshak-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
114: Itzee-----	90	Very limited Filtering capacity Droughty	1.00 0.04	Very limited Seepage	1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
115: Jacket-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too steep for sprinkler application	1.00		
116: Jacket-----	85	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		
117: Jacket-----	45	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	1.00		
Wellsbench-----	35	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Depth to bedrock	0.99
		Droughty	0.21	Cobble content	0.92
118: Jacot-----	45	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
118: Garveson-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
119: Jacot-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Garveson-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
120: Jaype-----	50	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Revling-----	35	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
121: Jaype, dry-----	65	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Revling, dry-----	15	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 1.00
122: Jaype-----	50	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Statemeadow-----	25	Very limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
123: Joel-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.90 0.37	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
123: Setters-----	30	Very limited Filtering capacity Depth to saturated zone Slow water movement Too acid Too steep for surface application	1.00 1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 1.00 1.00 1.00
124: Johnson-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.14
125: Johnson-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.14
Swayne-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
126: Johnson-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.14



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
126: Swayne-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
127: Johnson-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.14
Texascreek-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00 1.00 1.00 0.20 0.19	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
128: Jury-----	80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
129: Jury-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
130: Jury, cold-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
131: Jury-----	55	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
Weitas-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.91
		Too acid	0.91		
132: Jury-----	60	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
Weitas-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.91
		Too acid	0.91		

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
133: Kauder-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00		
		Too steep for sprinkler application	0.90		
134: Keeler, dry-----	50	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		
Keeler-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		
135: Keeler, moist-----	65	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		
Keeler-----	20	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
136: Keeler-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
Aldermand-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
137: Keeler-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
Jacot-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
138: Keeler-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
138: Lado-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
139: Kettenbach-----	40	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Slow water movement	1.00 1.00 1.00 0.92 0.06 0.37	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	1.00 1.00 1.00 0.99
Gwin-----	35	Very limited Depth to bedrock Droughty Too steep for surface application Too steep for sprinkler application Cobble content	1.00 1.00 1.00 1.00 0.59	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	1.00 1.00 1.00 0.78
Rock outcrop-----	15	Not rated		Not rated	
140: Kettenbach-----	45	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Slow water movement	1.00 1.00 1.00 0.92 0.06 0.37	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	1.00 1.00 1.00 0.99
Keuterville-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
141: Keuterville-----	80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
142: Keuterville-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
143: Keuterville-----	65	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Droughty	1.00 1.00 0.31 0.06	Very limited Seepage Too steep for surface application	1.00 1.00
Rock outcrop-----	20	Not rated		Not rated	
144: Klickson-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
145: Klickson-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
146: Klickson-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Agatha-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.90
147: Klickson-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Kettenbach-----	30	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Slow water movement	1.00 1.00 1.00 0.92 0.06 0.37	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	1.00 1.00 1.00 0.99



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
148: Klickson-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Rock outcrop-----	20	Not rated		Not rated	
Kettenbach-----	15	Very limited Too steep for surface application Too steep for sprinkler application Droughty Depth to bedrock Slow water movement	1.00 1.00 1.00 0.92 0.06 0.37	Very limited Seepage Depth to bedrock Too steep for surface application Cobble content	1.00 1.00 1.00 0.99
149: Konkol-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.99	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.99
Revling-----	25	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
150: Kooskia-----	80	Very limited Depth to saturated zone Too steep for surface application Slow water movement Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 1.00
151: Kooskia-----	80	Very limited Depth to saturated zone Slow water movement Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 0.82 0.01	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 0.01
152: Kruse-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.31	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
153: Kruse-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
154: Kruse-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Aldermand-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
155: Kruse-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Aldermand-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
156: Kruse-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
156: McCrosket, dry-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00 0.02	Very limited Seepage Too steep for surface application Cobble content Depth to bedrock	1.00 1.00 1.00 0.61
157: Kruse-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Noil-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Droughty	1.00 1.00 1.00 1.00 0.29	Very limited Seepage Too steep for surface application Too acid Depth to bedrock Cobble content	1.00 1.00 1.00 0.94 0.57
158: Kruse-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Teakean-----	40	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
159: Larkin-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application	1.00 1.00
Driscoll-----	35	Very limited Depth to saturated zone Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 1.00 1.00 1.00 0.14	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	1.00 1.00 1.00 0.14
160: Lebaron-----	45	Very limited Filtering capacity Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Flooding	1.00 1.00 0.40
Latahco-----	40	Very limited Filtering capacity Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.31 0.60	Very limited Seepage Depth to saturated zone Flooding	1.00 1.00 1.00
161: Lewhand-----	65	Very limited Slow water movement Depth to saturated zone Too acid Flooding	1.00 1.00 1.00 0.96 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.96
Burntcreek-----	20	Very limited Depth to saturated zone Too acid Flooding	1.00 0.42 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.42

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
162: Lewhand-----	80	Very limited Slow water movement Depth to saturated zone Too acid Flooding	1.00 1.00 0.96 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.96
Teneb-----	15	Very limited Depth to saturated zone Flooding Too acid Slow water movement	1.00 1.00 0.42 0.37	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.42
163: Longbar-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Bigtalk-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
164: Longbar-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Bigtalk-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
165: Longpen-----	75	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	1.00		
166: Longpen-----	60	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00		
		Too steep for sprinkler application	0.90		
167: Meland-----	50	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	0.90	Depth to bedrock	1.00
		Depth to bedrock	0.10	Too steep for surface application	1.00
		Slow water movement	0.31	Too acid	0.14
		Too acid	0.14		
Jacket-----	40	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	0.90		
168: Meland-----	55	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Depth to bedrock	0.10	Too steep for surface application	1.00
		Slow water movement	0.31	Too acid	0.14
		Too acid	0.14		



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
168: Keuterville-----	30	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Droughty	1.00 1.00 0.31 0.06	Very limited Seepage Too steep for surface application	1.00 1.00
169: Mushel-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Brodeer-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
170: Mushel-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Dullaxe-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
171: Nakarna, high precipitation-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.54
172: Nakarna, high precipitation-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.96
173: Nakarna-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.96
Nakarna, warm-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.96
174: Narnett-----	60	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 1.00 1.00 0.37 0.14	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.14

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
174: Jury-----	20	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
175: Neva-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
176: Newlig-----	85	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	0.90	Too steep for surface application	1.00
		Too acid	0.07	Too acid	0.07
177: Noil-----	45	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Depth to bedrock	0.94
		Droughty	0.29	Cobble content	0.57
Keeler-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.37		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
178: Noil-----	70	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Depth to bedrock	0.94
		Droughty	0.29	Cobble content	0.57
Bouldercreek, warm--	15	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
Rock outcrop-----	15	Not rated		Not rated	
179: Norwidge, moist----	50	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
		Slow water movement	0.78		
Threebear, moist----	45	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00		
		Too steep for sprinkler application	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
180: Odonnell-----	65	Very limited Filtering capacity Depth to saturated zone Too steep for surface application Slow water movement Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 1.00
Grandad-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
181: Odonnell-----	75	Very limited Filtering capacity Depth to saturated zone Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 1.00
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Depth to saturated zone Too acid Flooding	1.00 1.00 0.67 0.60	Very limited Seepage Depth to saturated zone Flooding Too acid	1.00 1.00 1.00 0.67
Itzee-----	15	Very limited Filtering capacity Droughty Too steep for surface application	1.00 0.04 0.32	Very limited Seepage	1.00
183: Pits, quarry-----	100	Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
184: Placer-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.26
Dowper-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
Grangemont-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
185: Poorman, dry-----	70	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
186: Poorman, dry-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
186: Poorman-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
187: Poorman-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
188: Poorman-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
189: Poorman-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad, dry-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
190: Poorman-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad, dry-----	35	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
191: Reggear-----	55	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 0.90	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
191: Kauder-----	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00		
		Too steep for sprinkler application	0.90		
192: Reggear-----	50	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	0.78
		Too steep for surface application	1.00		
		Too steep for sprinkler application	0.40		
Seddow-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	0.88
		Too steep for sprinkler application	0.40	Too steep for surface application	0.78
193: Rettig, high elevation-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
194: Rettig-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
195: Rettig, cold-----	90	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
196: Rettig, cool-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Rettig, dry-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
197: Rettig-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
198:					
Rettig, warm, dry---	60	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
Township-----	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Stone content	0.57
				Cobble content	0.41
199:					
Rettig-----	40	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
Township, wet-----	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00	Stone content	0.57
				Cobble content	0.41
Stepoff-----	15	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
200: Riswold-----	50	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	 1.00 1.00 1.00  1.00  0.37	Very limited Seepage Too acid Too steep for surface application	 1.00 1.00 1.00   
Cranberry-----	45	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	 1.00 1.00 1.00  0.40  0.68	Very limited Seepage Too acid Too steep for surface application	 1.00 1.00 0.78   
201: Riswold-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	 1.00 1.00  1.00  1.00 0.37	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00   1.00
Grangemont-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00  1.00  1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00   1.00
202: Rock outcrop-----	35	Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
202: Whiskeycreek-----	30	Very limited Filtering capacity Depth to bedrock Droughty Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
Texascreek, dry-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Depth to bedrock Droughty	1.00 1.00 1.00 1.00 0.20 0.19	Very limited Seepage Depth to bedrock Too steep for surface application	1.00 1.00 1.00
203: Scaler-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
204: Scaler-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grandad-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
205: Scaler-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Grangemont-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
206: Scand-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Scaler-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
207: Seddow-----	75	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00	Very limited Seepage Too steep for surface application Depth to bedrock	1.00 1.00 0.88



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
208: Sedgwick-----	85	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	0.88
209: Sedgwick-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	0.88
		Too steep for sprinkler application	0.40	Too steep for surface application	0.78
210: Setters-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	1.00		
		Too steep for surface application	0.68		
211: Shattuck-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
		Slow water movement	0.31		
212: Shattuck-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
		Slow water movement	0.31		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
213: Shattuck, moist-----	90	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.31	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
214: Shattuck, moist-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.31	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Dworshak, moist-----	40	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.37	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
215: Shattuck-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid Slow water movement	1.00 1.00 1.00 1.00 0.31	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
215: Dworshak-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
		Too acid	1.00		
		Slow water movement	0.37		
216: Sly-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	0.78
		Too steep for sprinkler application	0.40		
		Slow water movement	0.22		
Wilkins-----	15	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00
217: Southwick-----	85	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	0.22
		Too steep for surface application	1.00		
		Too steep for sprinkler application	0.10		
218: Southwick-----	45	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
218: Larkin-----	40	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.31	Very limited Seepage Too steep for surface application	1.00 1.00
219: Statemeadow-----	65	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 1.00 0.40 0.37	Very limited Seepage Too acid Too steep for surface application	1.00 1.00 0.78
Reggear-----	25	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 0.40	Very limited Seepage Depth to saturated zone Too steep for surface application	1.00 1.00 0.78
220: Swayne-----	85	Very limited Filtering capacity Too steep for surface application Slow water movement Too steep for sprinkler application	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
221: Taney-----	80	Very limited Slow water movement Depth to saturated zone Too steep for surface application Too acid Too steep for sprinkler application	 1.00  1.00  0.92  0.07 0.02	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	 1.00 1.00  0.06   0.07
222: Taney-----	50	Very limited Slow water movement Too steep for surface application Too steep for sprinkler application Too acid Depth to saturated zone	 1.00  1.00   1.00  0.42 0.95	Very limited Seepage Too steep for surface application Too acid Depth to saturated zone	 1.00 1.00    0.42 0.95
Joel-----	35	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement	 1.00   1.00   0.31	Very limited Seepage Too steep for surface application	 1.00 1.00
223: Taney-----	65	Very limited Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler application Too acid	 1.00  1.00  1.00  1.00  0.07	Very limited Seepage Depth to saturated zone Too steep for surface application Too acid	 1.00 1.00  1.00   0.07

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
223: McCrosket-----	25	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
		Droughty	0.02	Depth to bedrock	0.61
224: Taney-----	55	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	0.68	Too acid	0.07
		Too acid	0.07		
Setters-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	1.00		
		Too steep for surface application	0.68		
225: Taney-----	40	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	0.98	Too acid	0.07
		Too acid	0.07		
Setters-----	40	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Too acid	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Too acid	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
226: Teakean-----	80	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Too acid	1.00
		Too steep for sprinkler application	1.00		
227: Teneb-----	85	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Too acid	0.42	Flooding	1.00
		Slow water movement	0.37	Too acid	0.42
228: Texascreek-----	55	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	0.20		
		Droughty	0.19		
Rock outcrop-----	25	Not rated		Not rated	
229: Texascreek, dry-----	45	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	0.20		
		Droughty	0.19		
Whiskeycreek-----	35	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00		
		Too steep for sprinkler application	1.00		



# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
230: Norwidge-----	45	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application Slow water movement	 1.00 1.00 1.00  1.00  0.78	Very limited Seepage Too acid Too steep for surface application	 1.00 1.00 1.00   
Threebear-----	45	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Too steep for surface application	 1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Too acid Too steep for surface application	 1.00 1.00 1.00 1.00  
231: Tomodo-----	80	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00 1.00  
232: Tomodo-----	60	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00 1.00  
Lado-----	15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00 1.00  

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
233: Township-----	55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00 1.00 1.00 0.57 0.41
Rettig-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
234: Township-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00 1.00 1.00 0.57 0.41
Rettig-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
235: Township, dry-----	45	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Stone content Cobble content	1.00 1.00 1.00 0.57 0.41

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
235: Rettig, low precipitation-----	25	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00
Nakarna, dry-----	20	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Depth to bedrock	1.00 1.00 1.00 0.96
236: Trappercreek-----	50	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Slow water movement	1.00 1.00 0.40 0.37	Very limited Seepage Too steep for surface application	1.00 0.78
Narnett-----	35	Very limited Too steep for surface application Too steep for sprinkler application Slow water movement Too acid	1.00 0.40 0.37 0.14	Very limited Seepage Too steep for surface application Too acid	1.00 0.78 0.14
237: Uvi-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 10.-Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation	Overland flow of wastewater		
		Rating class and limiting features	Value	Rating class and limiting features	Value
238: Uvi-----	90	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00	Very limited Seepage Too steep for surface application	1.00 1.00
239: Vaywood, high precipitation-----	60	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.01
Vaywood, dry-----	30	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.01
240: Vaywood-----	85	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.01
241: Vaywood-----	65	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00	Very limited Seepage Too steep for surface application Too acid Cobble content	1.00 1.00 1.00 0.01

# Soil Survey of Clearwater Area, Idaho

Table 10.—Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
241: Handoff-----	20	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Too steep for surface application	0.68	Depth to bedrock	0.99
		Droughty	0.21	Cobble content	0.92
244: Wellsbench-----	50	Very limited Too steep for surface application	1.00	Very limited Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Depth to bedrock	0.99
		Droughty	0.21	Cobble content	0.92
Lacy-----	30	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
245: Wilkins-----	85	Very limited Slow water movement	1.00	Very limited Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	0.60	Flooding	1.00

# Soil Survey of Clearwater Area, Idaho

**Table 11.**—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Slope Depth to bedrock Slow water movement Cobble content	1.00 1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Very limited Slope Depth to bedrock Slow water movement Cobble content	1.00 1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
3: Agatha-----	75	Very limited Slope Depth to bedrock Slow water movement Cobble content	1.00 1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
4: Ahsahka-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	1.00 1.00 1.00 0.49 0.01

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
4: Fordcreek-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00  1.00  1.00 0.98
5: Ahsahka-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	1.00  1.00  1.00 0.49 0.01
Whiskeycreek-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 0.62	Very limited Filtering capacity Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00  1.00
6: Aldermant-----	85	Very limited Slope Slow water movement Stone content	1.00 1.00 0.28	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00  1.00 1.00
7: Aldermant-----	90	Very limited Slope Slow water movement Stone content	1.00 1.00 0.28	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00  1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
8: Aldermand, dry-----	75	Very limited Slope Slow water movement Stone content	 1.00 1.00  0.28	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00   1.00 1.00 1.00
9: Aquandic Cryaquepts	90	Very limited Flooding Depth to saturated zone Slow water movement	 1.00 1.00  1.00	Very limited Depth to saturated zone Flooding Too acid	 1.00  1.00 0.96
10: Aquandic Endoaquepts	60	Very limited Slow water movement Depth to saturated zone Flooding	 1.00  1.00 0.60	Very limited Depth to saturated zone Too acid Slow water movement Flooding	 1.00  0.96 0.26 0.60
Aquandic Dystrudepts	20	Very limited Slow water movement Depth to saturated zone Cobble content Flooding	 1.00  1.00 0.28 0.60	Very limited Filtering capacity Depth to saturated zone Too acid Slow water movement Flooding	 1.00 1.00  1.00 0.30 0.60
11: Bandmill, dry-----	40	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00
Grangemont-----	30	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
11: Bargamin-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
12: Bandmill-----	40	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Riswold-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
13: Berthahill, moist---	75	Very limited Slope Slow water movement Stone content Cobble content Too acid	1.00 1.00 0.17 0.68 0.03	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Handoff-----	15	Very limited Slope Slow water movement Stone content	1.00 1.00 0.06	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
14: Berthahill-----	70	Very limited Slope Slow water movement Stone content Cobble content Too acid	 1.00 1.00  0.17 0.68 0.03	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00   1.00
Handoff-----	20	Very limited Slope Slow water movement Stone content	 1.00 1.00  0.06	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00   1.00
15: Berthahill-----	65	Very limited Slope Slow water movement Stone content Cobble content Too acid	 1.00 1.00  0.17 0.68 0.03	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00   1.00
Shattuck-----	15	Very limited Slope Slow water movement Cobble content Stone content	 1.00 1.00  0.10 0.03	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00     1.00 0.21
16: Bigtalk, cool-----	60	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00   1.00
Bigtalk, wet-----	25	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00   1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
17: Bigtalk-----	80	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
18: Bigtalk, cool-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Floodwood, cool-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
19: Bigtalk, cool-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Keeler, cool-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20: Bouldercreek, moist	85	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00 1.00
21: Bouldercreek-----	75	Very limited Slope Slow water movement Stone content Cobble content	 1.00 1.00  0.39 0.09	Very limited Too steep for surface application Too steep for sprinkler irrigation	 1.00  1.00 1.00
22: Bouldercreek-----	75	Very limited Slope Slow water movement Stone content Cobble content	 1.00 1.00  0.39 0.09	Very limited Too steep for surface application Too steep for sprinkler irrigation	 1.00  1.00 1.00
23: Bouldercreek, moist	75	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00 1.00
Brodeer-----	15	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00
24: Bouldercreek-----	65	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
24: Brodeer-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
25: Bouldercreek-----	55	Very limited Slope Slow water movement Cobble content	1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Judgetown-----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.26
26: Bouldercreek, high precipitation-----	50	Very limited Slope Slow water movement Stone content Cobble content	1.00 1.00 0.39 0.09	Very limited Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00
Marblecreek-----	30	Very limited Slope Slow water movement Cobble content	1.00 1.00 0.84	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
27: Boulder creek, cool, dry-----	70	Very limited Slope Slow water movement Cobble content	1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Rettig, cool-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
28: Brequito, dry-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
29: Brequito-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grangemont-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
30: Brequito-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Lado, dry-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
31: Brequito-----	60	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 0.78
Lado, dry-----	25	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 0.78
32: Brequito-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
32: Mushel-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
33: Brequito-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Mushel-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
34: Brodeer, dry-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Brodeer-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
35: Brodeer-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
35: Mushel-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
36: Brodeer, warm-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Mushel, dry-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
37: Brodeer-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Boulder creek-----	25	Very limited Slope Slow water movement Cobble content	1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
38: Brodeer-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Flewsie, dry-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
39: Brodeer-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Lostpete-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
40: Brodeer, moist-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Lostpete, moist-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
41: Brodeer, dry-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Mushel-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
42: Brodeer-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Mushel-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
43: Burntcreek-----	80	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Too acid Flooding	1.00 0.42 0.60
44: Campra-----	80	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.94

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
45: Campra-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.94
Sly-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.15
46: Carlinton-----	80	Very limited Slope Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00
47: Carlinton-----	85	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 1.00 1.00
48: Carlinton-----	50	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
48: Kruse-----	35	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 1.00 0.26
49: Carlinton-----	55	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too acid Too steep for surface application	1.00 1.00 1.00 1.00 1.00
Seddow-----	35	Very limited Depth to bedrock Slow water movement Slope	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation	1.00 1.00 0.88 0.50
50: Caseycreek-----	80	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 0.95
51: Cavendish-----	75	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 0.12	Somewhat limited Depth to bedrock Too steep for surface application Slow water movement	0.94 0.32 0.26



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52: Cavendish-----	45	Very limited Slope Slow water movement Depth to bedrock	 1.00 1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Slow water movement	 1.00  1.00 0.94 0.26
Taney-----	40	Very limited Slope movement Slow water movement Depth to saturated zone	 1.00 1.00 1.00	Very limited Slow water Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00 1.00 1.00 0.07
53: Cobbler-----	55	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00 1.00 1.00
Aldermant-----	35	Very limited Slope Slow water movement Stone content	 1.00 1.00 0.28	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00 1.00 1.00
54: Cobbler-----	50	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54: Noil-----	45	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Too steep for	1.00
		Slow water	1.00	surface	
		movement		application	
		Cobble content	0.61	Too steep for	1.00
				sprinkler	
				irrigation	
				Too acid	1.00
				Depth to bedrock	0.94
55: Cranberry-----	60	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Too acid	1.00
				Slow water	0.50
				movement	
Riswold-----	20	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Slow water	0.26
				movement	
56: Crumarine-----	95	Very limited		Very limited	
		Depth to saturated	1.00	Filtering capacity	1.00
		zone		Depth to saturated	1.00
		Slow water	1.00	zone	
		movement		Too acid	0.77
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Very limited		Very limited	
		Slow water	1.00	Depth to saturated	1.00
		movement		zone	
		Depth to saturated	1.00	Too steep for	1.00
		zone		surface	
		Slope	1.00	application	
				Slow water	0.96
				movement	
				Too steep for	0.22
				sprinkler	
				irrigation	
				Too acid	0.14

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
59: Driscoll-----	45	Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	 1.00  1.00  1.00  0.96 0.14
Larkin-----	35	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00  1.00  0.26
60: Dullaxe, high elevation-----	45	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00
Dullaxe-----	35	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00
61: Dullaxe, dry-----	60	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
61: Dullaxe, wet-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
62: Dullaxe-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Brodeer-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
63: Dullaxe-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Brodeer-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
64: Dullaxe-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
64: Judgetown-----	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.26
65: Dullaxe-----	70	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Judgetown, moist----	25	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.26
66: Dullaxe-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Jury, moist-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68: Dworshak-----	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
69: Dworshak-----	80	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
Brequito-----	15	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
70: Elkberry-----	45	Very limited Slope Slow water movement Too acid	1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.15
Elkberry, wet-----	30	Very limited Slope Slow water movement Too acid	1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.15

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
71: Elkberry-----	45	Very limited Slope Slow water movement Too acid	 1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00 1.00 0.15
Dworshak-----	40	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00 1.00 0.26
72: Elkridge-----	55	Very limited Slope Slow water movement Cobble content	 1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00
Riswold-----	40	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00 1.00 0.26
73: Elkridge-----	65	Very limited Slope Slow water movement Cobble content	 1.00 1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
73: Riswold-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
74: Fico, dry-----	55	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.05
Hucherit, warm-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
75: Fico-----	50	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.05
Weitas-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.91

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
76: Flewsie, high precipitation-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
77: Flewsie, low precipitation-----	70	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Flewsie, dry-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
78: Floodwood-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.26
79: Floodwood, warm-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
79: Keeler-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
80: Floodwood-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Keeler, warm-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
81: Floodwood-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Keeler, warm-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
82: Flumecreek-----	85	Very limited Slope Slow water movement Stone content Cobble content Too acid	 1.00 1.00  1.00 0.68 0.01	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00   1.00
83: Flumecreek-----	65	Very limited Slope Slow water movement Stone content Cobble content Too acid	 1.00 1.00  1.00 0.68 0.01	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00
Stepoff-----	20	Very limited Slope Slow water movement Too acid	 1.00 1.00  0.42	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00
Dworshak, dry-----	15	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00 1.00 0.26
84: Fordcreek-----	70	Very limited Slope Depth to bedrock Slow water movement	 1.00 1.00 1.00  	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	 1.00  1.00  0.98
85: Fordcreek-----	80	Very limited Depth to bedrock Slow water movement Slope	 1.00 1.00  1.00	Very limited Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation	 1.00  0.98 0.78

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
86: Garveson, high precipitation-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Floodwood-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
87: Gramil-----	60	Very limited Ponding Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Slow water movement Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.21
Lewhand-----	30	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Slow water movement Depth to saturated zone Too acid Flooding	1.00 1.00 0.96 0.60
88: Gramil-----	50	Very limited Ponding Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Slow water movement Ponding Depth to saturated zone Too acid	1.00 1.00 1.00 0.21
Reggear-----	40	Very limited Slow water movement Depth to saturated zone	1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application	1.00 1.00 1.00 0.02

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
89: Grandad-----	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
90: Grandad, dry-----	70	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grandad-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
91: Grandad, dry-----	70	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grandad-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
92: Grandad-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Rettig-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
93: Grandad, wet-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Rettig, wet-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
94: Grandad, dry-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
94: Scand-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
95: Grangemont-----	60	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Kauder-----	35	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00
96: Grangemont, dry-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Kauder, dry-----	40	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97: Grangemont-----	60	Very limited Slow water movement Slope	1.00 1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Kauder, moist-----	30	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00
98: Grangemont, wet-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Riswold-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
99: Grasshopper-----	80	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Slow water movement Flooding	1.00 0.26 0.60

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100: Gwin-----	45	Very limited Slope Depth to bedrock Slow water movement Cobble content	 1.00 1.00 1.00  0.78	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Cobble content	 1.00 1.00    1.00  0.59
Kettenbach-----	40	Very limited Slope Slow water movement Depth to bedrock Cobble content	 1.00 1.00  1.00 0.99	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00      0.26
101: Gwin-----	45	Very limited Slope Depth to bedrock Slow water movement Cobble content	 1.00 1.00 1.00  0.78	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Cobble content	 1.00 1.00    1.00  0.59
Kettenbach-----	30	Very limited Slope Slow water movement Depth to bedrock Cobble content	 1.00 1.00  1.00 0.99	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00      0.26
Keuterville-----	20	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00    1.00  0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
102: Hildebrand-----	55	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Too acid Depth to saturated zone	0.32 0.77 0.78
Spacecreek, dry-----	35	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.12	Very limited Filtering capacity Too acid Too steep for surface application Depth to saturated zone	1.00 1.00 0.32 0.78
103: Hubub, wet-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
104: Hubub, wet-----	65	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Dworshak-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
105: Hubub-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Lostpete-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
106: Hucberit-----	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
107: Hucberit-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Vaywood, high precipitation-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
108: Hugus-----	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
109: Hugus-----	90	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
110: Hugus, moist-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
111: Hugus, high precipitation-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
112: Hugus, moist-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
Hugus-----	15	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
113: Hugus-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
Dworshak-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
114: Itzee-----	90	Somewhat limited Slow water movement	0.32	Very limited Filtering capacity	1.00



# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
115: Jacket-----	80	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
116: Jacket-----	85	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Slow water movement Too steep for sprinkler irrigation	1.00 0.96 0.22
117: Jacket-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
Wellsbench-----	35	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.94	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Slow water movement	1.00 1.00 1.00 0.99 0.96
118: Jacot-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
118: Garveson-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
119: Jacot-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Garveson-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
120: Jaype-----	50	Very limited Slow water movement Slope Too acid	1.00 1.00 1.00 0.14	Very limited Filtering capacity Slow water Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Revling-----	35	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
121: Jaype, dry-----	65	Very limited Slow water movement Slope Too acid	1.00 1.00 0.14	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Revling, dry-----	15	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 1.00 0.26
122: Jaype-----	50	Very limited Slope Slow water movement Too acid	1.00 1.00 0.14	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Statemeadow-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
123: Joel-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
123: Setters-----	30	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Too acid Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00
124: Johnson-----	75	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 1.00 0.14
125: Johnson-----	55	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 1.00 0.14
Swayne-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
126: Johnson-----	45	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.14

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
126: Swayne-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
127: Johnson-----	50	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.14
Texascreek-----	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
128: Jury-----	80	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
129: Jury-----	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
130: Jury, cold-----	90	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
131: Jury-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Weitas-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.91
132: Jury-----	60	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Weitas-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 0.91

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
133: Kauder-----	80	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00
134: Keeler, dry-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Keeler-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
135: Keeler, moist-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Keeler-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
136: Keeler-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Aldermand-----	30	Very limited Slope Slow water movement Stone content	1.00 1.00 0.28	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
137: Keeler-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Jacot-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
138: Keeler-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
138: Lado-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
139: Kettenbach-----	40	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.99	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Gwin-----	35	Very limited Slope Depth to bedrock Slow water movement Cobble content	1.00 1.00 1.00 0.78	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Cobble content	1.00 1.00 1.00 0.59
Rock outcrop-----	15	Not rated		Not rated	
140: Kettenbach-----	45	Very limited Slope Slow water movement Depth to bedrock Cobble content	1.00 1.00 1.00 0.99	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26
Keuterville-----	30	Very limited Slope Slow water movement Cobble content	1.00 1.00 0.15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
141: Keuterville-----	80	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00   1.00   0.26
142: Keuterville-----	65	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.15	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00   1.00   0.26
143: Keuterville-----	65	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00   1.00   0.21
Rock outcrop-----	20	Not rated		Not rated	
144: Klickson-----	85	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.08	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00   1.00   1.00 0.96

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
145: Klickson-----	70	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.08	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00    1.00  1.00 0.96
146: Klickson-----	50	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.08	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00    1.00  1.00 0.96
Agatha-----	35	Very limited Slope Depth to bedrock Slow water movement Cobble content	 1.00 1.00 1.00  1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00     1.00
147: Klickson-----	50	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.08	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00    1.00  1.00 0.96
Kettenbach-----	30	Very limited Slope Slow water movement Depth to bedrock Cobble content	 1.00 1.00  1.00 0.99	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00     0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
148: Klickson-----	50	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.08	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00    1.00 0.96
Rock outcrop-----	20	Not rated		Not rated	
Kettenbach-----	15	Very limited Slope Slow water movement Depth to bedrock Cobble content	 1.00 1.00  1.00 0.99	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00     0.26
149: Konkol-----	45	Very limited Slow water movement Slope Too acid	 1.00  1.00 0.55	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00     0.99
Revling-----	25	Very limited Slow water movement Slope	 1.00  1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00     0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
150: Kooskia-----	80	Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00  1.00  1.00  0.96
151: Kooskia-----	80	Very limited Slow water movement Depth to saturated zone Slope	 1.00  1.00  0.72	Very limited Depth to saturated zone Slow water movement Too steep for surface application Too steep for sprinkler irrigation	 1.00  0.96  0.82  0.01
152: Kruse-----	85	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00  1.00  0.21
153: Kruse-----	75	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00  1.00  0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
154: Kruse-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
Aldermand-----	40	Very limited Slope Slow water movement Stone content	1.00 1.00 0.28	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
155: Kruse-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
Aldermand-----	35	Very limited Slope Slow water movement Stone content	1.00 1.00 0.28	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
156: Kruse-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26



# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
156: McCrosket, dry-----	40	Very limited Slope Depth to bedrock Slow water movement Cobble content	 1.00 1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	 1.00 1.00  1.00  0.61
157: Kruse-----	70	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00  1.00 0.26
157: Noil-----	20	Very limited Slope Depth to bedrock Slow water movement Cobble content	 1.00 1.00 1.00 0.61	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	 1.00 1.00  1.00  1.00 0.94
158: Kruse-----	45	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	 1.00 1.00  1.00  1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
158: Teakean-----	40	Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00  1.00 1.00
159: Larkin-----	50	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00   1.00  0.26
Driscoll-----	35	Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	 1.00  1.00  1.00  0.96 0.14
160: Lebaron-----	45	Very limited Slow water movement Depth to saturated zone	 1.00  1.00	Very limited Filtering capacity Depth to saturated zone Slow water movement	 1.00 1.00  0.96
Latahco-----	40	Very limited Slow water movement Depth to saturated zone Flooding	 1.00  1.00 0.60	Very limited Filtering capacity Depth to saturated zone Slow water movement Flooding	 1.00 1.00  0.21 0.60

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
161: Lewhand-----	65	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Slow water movement Depth to saturated zone Too acid Flooding	1.00 1.00 0.96 0.60
Burntcreek-----	20	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Too acid Flooding	1.00 0.42 0.60
162: Lewhand-----	80	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Slow water movement Depth to saturated zone Too acid Flooding	1.00 1.00 0.96 0.60
Teneb-----	15	Very limited Flooding Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Too acid Slow water movement	1.00 1.00 0.42 0.26
163: Longbar-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Bigtalk-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
164: Longbar-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
Bigtalk-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
165: Longpen-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
166: Longpen-----	60	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
167: Meland-----	50	Very limited Slow water movement Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	1.00 1.00 1.00 0.21 0.14

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
167: Jacket-----	40	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.96
168: Meland-----	55	Very limited Slope Slow water movement Depth to bedrock	1.00 1.00 1.00	Very limited Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement Too acid	1.00 1.00 1.00 0.21 0.14
Keuterville-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.21
169: Mushel-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Brodeer-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
170: Mushel-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Dullaxe-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
171: Nakarna, high precipitation-----	75	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.54
172: Nakarna, high precipitation-----	75	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.96
173: Nakarna-----	45	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.96

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
173: Nakarna, warm-----	35	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00 1.00 1.00 0.96
174: Narnett-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 0.14 0.26
Jury-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
175: Neva-----	80	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
176: Newlig-----	85	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.07



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
177: Noil-----	45	Very limited Slope Depth to bedrock Slow water movement Cobble content	 1.00 1.00 1.00  0.61	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	 1.00 1.00   1.00   1.00 0.94
Keeler-----	30	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00   1.00  0.26
178: Noil-----	70	Very limited Slope Depth to bedrock Slow water movement Cobble content	 1.00 1.00 1.00  0.61	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	 1.00 1.00   1.00  1.00 0.94
Bouldercreek, warm--	15	Very limited Slope Slow water movement Cobble content	 1.00 1.00  0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00   1.00  1.00
Rock outcrop-----	15	Not rated		Not rated	
179: Norwidge, moist-----	50	Very limited Slow water movement Slope Too acid	 1.00  1.00 0.07	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00 1.00  1.00  1.00 0.60

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
179: Threebear, moist----	45	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00
180: Odonnell-----	65	Very limited Slope Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 1.00 1.00 0.96
Grandad-----	15	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
181: Odonnell-----	75	Very limited Slope Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 1.00 0.96

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Depth to saturated zone Slow water movement Flooding	1.00  0.32  0.60	Very limited Depth to saturated zone Too acid Flooding	1.00  0.67 0.60
Itzee-----	15	Somewhat limited Slow water movement Slope	0.32  0.12	Very limited Filtering capacity Too steep for surface application	1.00 0.32
183: Pits, quarry-----	100	Not rated		Not rated	
184: Placer-----	40	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	1.00 1.00  1.00 1.00 0.26
Dowper-----	30	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00  1.00
Grangemont-----	15	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00  1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
185: Poorman, dry-----	70	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
186: Poorman, dry-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Poorman-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
187: Poorman-----	55	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grandad-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
188: Poorman-----	50	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grandad-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
189: Poorman-----	75	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grandad, dry-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
190: Poorman-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
190: Grandad, dry-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
191: Reggear-----	55	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 1.00
Kauder-----	25	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
192: Reggear-----	50	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 0.78

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
192: Seddow-----	30	Very limited Depth to bedrock Slow water movement Slope	 1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation	 1.00 1.00  0.88 0.78
193: Rettig, high elevation-----	80	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00
194: Rettig-----	80	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00
195: Rettig, cold-----	90	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00
196: Rettig, cool-----	50	Very limited Slope Slow water movement	 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
196: Rettig, dry-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
197: Rettig-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grandad-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
198: Rettig, warm, dry---	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Township-----	25	Very limited Slope Slow water movement Stone content Cobble content	1.00 1.00 0.97 0.80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
199:					
Rettig-----	40	Very limited Slope	1.00	Very limited Filtering capacity	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Too acid	1.00
Township, wet-----	25	Very limited Slope	1.00	Very limited Filtering capacity	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Stone content	0.97	Too steep for sprinkler irrigation	1.00
		Cobble content	0.80	Too acid	1.00
Stepoff-----	15	Very limited Slope	1.00	Very limited Filtering capacity	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too steep for sprinkler irrigation	1.00
200:					
Riswold-----	50	Very limited Slow water movement	1.00	Very limited Filtering capacity	1.00
		Slope	1.00	Too acid	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	1.00
				Slow water movement	0.26
Cranberry-----	45	Very limited Slow water movement	1.00	Very limited Filtering capacity	1.00
		Slope	1.00	Too acid	1.00
				Too steep for surface application	1.00
				Too steep for sprinkler irrigation	0.78
				Slow water movement	0.50

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
201:					
Riswold-----	45	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Too acid	1.00
				Slow water	0.26
				movement	
Grangemont-----	40	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Too acid	1.00
202:					
Rock outcrop-----	35	Not rated		Not rated	
Whiskeycreek-----	30	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water	0.62	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
Texascreek, dry-----	25	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
203:					
Scaler-----	85	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Too acid	1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
204: Scaler-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grandad-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
205: Scaler-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Grangemont-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
206: Scand-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
206: Scaler-----	15	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
207: Seddown-----	75	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.88
208: Seddown-----	85	Very limited Slope Depth to bedrock Slow water movement	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.88
209: Seddown-----	80	Very limited Depth to bedrock Slow water movement Slope	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Depth to bedrock Too steep for sprinkler irrigation	1.00 1.00 0.88 0.78
210: Setters-----	80	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 0.50	Very limited Filtering capacity Depth to saturated zone Too acid Slow water movement Too steep for surface application	1.00 1.00 1.00 0.96 0.68

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
211: Shattuck-----	90	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Cobble content	0.10	Too steep for sprinkler irrigation	1.00
		Stone content	0.03	Too acid	1.00
				Slow water movement	0.21
212: Shattuck-----	90	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Cobble content	0.10	Too steep for sprinkler irrigation	1.00
		Stone content	0.03	Too acid	1.00
				Slow water movement	0.21
213: Shattuck, moist-----	90	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Cobble content	0.10	Too steep for sprinkler irrigation	1.00
		Stone content	0.03	Too acid	1.00
				Slow water movement	0.21
214: Shattuck, moist-----	50	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Cobble content	0.10	Too steep for sprinkler irrigation	1.00
		Stone content	0.03	Too acid	1.00
				Slow water movement	0.21

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
214: Dworshak, moist-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
215: Shattuck-----	60	Very limited Slope Slow water movement Cobble content Stone content	1.00 1.00 0.10 0.03	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.21
Dworshak-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 1.00 1.00 1.00 0.26
216: Sly-----	80	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.78 0.15
Wilkins-----	15	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60	Very limited Slow water movement Depth to saturated zone Flooding	1.00 1.00 0.60



# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
217: Southwick-----	85	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 0.22
218: Southwick-----	45	Very limited Slope movement Depth to saturated zone	1.00 1.00	Very limited Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00
Larkin-----	40	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.21
219: Statemeadow-----	65	Very limited Slow water movement Slope	1.00 1.00	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.78 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
219: Reggear-----	25	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00 1.00 0.78
220: Swayne-----	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 1.00 0.96
221: Taney-----	80	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 0.88	Very limited Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 0.92 0.06 0.07
222: Taney-----	50	Very limited Slope Slow water movement Depth to saturated zone	1.00 1.00 0.96	Very limited Slow water movement Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to saturated zone	1.00 1.00 1.00 0.42 0.95

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
222: Joel-----	35	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.21
223: Taney-----	65	Very limited Slope Slow water movement Depth to saturated zone	1.00 1.00 1.00	Very limited Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00 1.00 0.07
McCrosket-----	25	Very limited Slope Depth to bedrock Slow water movement Cobble content	1.00 1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock	1.00 1.00 1.00 0.61
224: Taney-----	55	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 0.50	Very limited Slow water movement Depth to saturated zone Too steep for surface application Too acid	1.00 1.00 0.68 0.07
Setters-----	35	Very limited Slow water movement Depth to saturated zone Slope	1.00 1.00 0.50	Very limited Filtering capacity Depth to saturated zone Too acid Slow water movement Too steep for surface application	1.00 1.00 1.00 0.96 0.68

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
225: Taney-----	40	Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Slow water Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00  1.00  1.00  1.00  0.07
Setters-----	40	Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Filtering capacity Depth to saturated zone Too steep for surface application Too acid Too steep for sprinkler irrigation	 1.00 1.00  1.00  1.00  1.00  1.00
226: Teakean-----	80	Very limited Slope Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Filtering capacity Slow water movement Depth to saturated zone Too steep for surface application Too steep for sprinkler irrigation	 1.00 1.00  1.00  1.00  1.00  1.00
227: Teneb-----	85	Very limited Flooding Slow water movement Depth to saturated zone	 1.00 1.00  1.00	Very limited Depth to saturated zone Flooding Too acid Slow water movement	 1.00  1.00  0.42 0.26

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
228:					
Texascreek-----	55	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
Rock outcrop-----	25	Not rated		Not rated	
229:					
Texascreek, dry-----	45	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water	1.00	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
Whiskeycreek-----	35	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water	0.62	Too steep for	1.00
		movement		surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
230:					
Norwidge-----	45	Very limited		Very limited	
		Slow water	1.00	Filtering capacity	1.00
		movement		Too acid	1.00
		Slope	1.00	Too steep for	1.00
		Too acid	0.07	surface	
				application	
				Too steep for	1.00
				sprinkler	
				irrigation	
				Slow water	0.60
				movement	
Threebear-----	45	Very limited		Very limited	
		Slow water	1.00	Filtering capacity	1.00
		movement		Slow water	1.00
		Depth to saturated	1.00	movement	
		zone		Depth to saturated	1.00
		Slope	1.00	zone	
				Too acid	1.00
				Too steep for	1.00
				surface	
				application	

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
231: Tomodo-----	80	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Slow water movement Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00 1.00
232: Tomodo-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Slow water Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00 1.00
Lado-----	15	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
233: Township-----	55	Very limited Slope Slow water movement Stone content Cobble content	1.00 1.00 0.97 0.80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00 1.00
Rettig-----	25	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
234: Township-----	65	Very limited Slope Slow water movement Stone content Cobble content	 1.00 1.00  0.97 0.80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00    1.00 1.00 1.00
Rettig-----	25	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00   1.00 1.00 1.00
235: Township, dry-----	45	Very limited Slope Slow water movement Stone content Cobble content	 1.00 1.00  0.97 0.80	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00   1.00 1.00 1.00
Rettig, low precipitation-----	25	Very limited Slope Slow water movement	 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	 1.00 1.00   1.00 1.00 1.00
Nakarna, dry-----	20	Very limited Slope Depth to bedrock Slow water movement	 1.00 1.00 1.00  	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid Depth to bedrock	 1.00 1.00   1.00 1.00 1.00 0.96



# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
236: Trappercreek-----	50	Very limited Slow water movement Slope Too acid	1.00 1.00 0.07	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Slow water movement	1.00 1.00 0.78 0.26
Narnett-----	35	Very limited Slow water movement Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation Too acid Slow water movement	1.00 0.78 0.14 0.26
237: Uvi-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
238: Uvi-----	90	Very limited Slope Slow water movement	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00
239: Vaywood, high precipitation-----	60	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 11.-Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment-Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
239: Vaywood, dry-----	30	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
240: Vaywood-----	85	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
241: Vaywood-----	65	Very limited Slope Slow water movement	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation Too acid	1.00 1.00 1.00 1.00
Handoff-----	20	Very limited Slope Slow water movement Stone content	1.00 1.00 0.06	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler irrigation	1.00 1.00 1.00
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Very limited Slow water movement Depth to bedrock Cobble content Slope	1.00 1.00 0.94 0.50	Somewhat limited Depth to bedrock Slow water movement Too steep for surface application	0.99 0.96 0.68

# Soil Survey of Clearwater Area, Idaho

Table 11.—Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
244: Wellsbench-----	50	Very limited Slope Slow water movement Depth to bedrock Cobble content	 1.00 1.00  1.00 0.94	Very limited Too steep for surface application Too steep for sprinkler irrigation Depth to bedrock Slow water movement	 1.00  1.00  0.99 0.96
Lacy-----	30	Very limited Slope Slow water movement Depth to bedrock Cobble content	 1.00 1.00  1.00 1.00	Very limited Filtering capacity Depth to bedrock Too steep for surface application Too steep for sprinkler irrigation Slow water movement	 1.00 1.00 1.00  1.00  0.26
245: Wilkins-----	85	Very limited Slow water movement Depth to saturated zone Flooding	 1.00  1.00  0.60	Very limited Slow water movement Depth to saturated zone Flooding	 1.00  1.00  0.60

Table 12.—Forest Productivity

(Absence of an entry indicates that the map unit component does not support

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Volume of wood fiber (CMAI)	CMAI age				
		Ft		Yrs	Cu ft/ac/yr	Yrs				
1: Agatha, very rocky-----	Grand fir-----	81	5.3	50	116	106				
	Lodgepole pine-----	---	---	100	---	---				
	Ponderosa pine-----	---	---	100	---	---				
	Rocky Mountain Douglas-fir-----	76	---	50	75	99				
	Western larch-----	---	---	50	---	---				
Rock outcrop-----	---	---	---	---	---	---				
2: Agatha-----	Grand fir-----	81	5.3	50	116	106				
	Lodgepole pine-----	---	---	100	---	---				
	Ponderosa pine-----	---	---	100	---	---				
	Rocky Mountain Douglas-fir-----	76	---	50	75	99				
	Western larch-----	---	---	50	---	---				
3: Agatha-----	Grand fir-----	81	5.3	50	116	106				
	Lodgepole pine-----	---	---	100	---	---				
	Ponderosa pine-----	---	---	100	---	---				
	Rocky Mountain Douglas-fir-----	76	---	50	75	99				
	Western larch-----	---	---	50	---	---				
4: Ahsahka-----	Ponderosa pine-----	115	---	100	132	40				
Fordcreek-----	Ponderosa pine-----	100	10.0	100	102	40				
5: Ahsahka-----	Ponderosa pine-----	115	---	100	132	40				
	Rocky Mountain Douglas-fir-----	---	---	50	---	---				
Whiskeycreek-----	Ponderosa pine-----	92	6.0	100	87	40				

Table 12.-Forest Productivity-Continued

Map symbol and soil name		Potential productivity						
		Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
			Ft		Yrs	Cu ft/ac/yr	Yrs	
6: Aldermand-----	Engelmann spruce-----	---		---	100	---	---	
	Grand fir-----	91		---	50	135	95	
	Lodgepole pine-----	---		---	100	---	---	
	Rocky Mountain Douglas-fir-----	82	9.4	50	86	96		
	Subalpine fir-----	---	---	100	---	---		
	Western larch-----	---	---	50	---	---		
7: Aldermand-----	Western redcedar-----	---		---	100	---	---	
	Western white pine--	---	---	50	---	---	---	
	Grand fir-----	91		---	50	135	95	
	Lodgepole pine-----	---		---	100	---	---	
	Rocky Mountain Douglas-fir-----	82	9.4	50	86	96		
	Subalpine fir-----	---	---	100	---	---		
8: Aldermand, dry-----	Western hemlock-----	---		---	100	---	---	
	Western larch-----	---		---	50	---	---	
	Western redcedar-----	---		---	100	---	---	
	Western white pine--	---	---	50	---	---	---	
	Engelmann spruce-----	---		---	100	---	---	
	Grand fir-----	77		---	50	108	109	
9: Aquandic Cryaquepts-----	Lodgepole pine-----	---		---	100	---	---	
	Ponderosa pine-----	---		---	100	---	---	
	Rocky Mountain Douglas-fir-----	82	11.7	50	86	96		
	Western larch-----	64	---	50	89	70		
	Western white pine--	---	---	50	---	---	---	
	---	---		---	---	---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name		Potential productivity									
		Common trees		Site index average	Site index standard deviation*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
10:											
Aquandic Endoaquepts-----	---	---	---	---	---	---	---	---	---	---	
Aquandic Dystrudepts-----	---	---	---	---	---	---	---	---	---	---	
11:											
Bandmill, dry-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---	
	Grand fir-----	95	15.7	50	---	50	143	---	92	---	
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	---	---	---	---	100	---	---	---	---	
	Rocky Mountain										
	Douglas-fir-----	103	7.0	50	---	50	139	---	77	---	
	Western larch-----	---	---	---	---	50	---	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	---	
Grangemont-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---	
	Grand fir-----	90	---	---	---	50	133	---	96	---	
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---	
	Rocky Mountain										
	Douglas-fir-----	---	---	---	---	100	---	---	---	---	
	Subalpine fir-----	---	---	---	---	100	---	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	---	
	Western redcedar----	---	---	---	---	100	---	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	---	
Bargamin-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---	
	Grand fir-----	102	12.5	50	---	50	157	---	88	---	
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	---	---	---	---	100	---	---	---	---	
	Rocky Mountain										
	Douglas-fir-----	95	---	---	---	50	117	---	84	---	
	Western larch-----	---	---	---	---	50	---	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
12: Bandmill-----	Engelmann spruce----	---	---	---	100	---	---	---	---	---
	Grand fir-----	101	5.7	---	50	155	---	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	110	---	---	50	160	---	---	---	72
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	100	---	---	50	162	---	---	---	70
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
Riswold-----	Engelmann spruce----	---	---	---	100	---	---	---	---	---
	Grand fir-----	104	7.9	---	50	161	---	---	---	87
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	97	10.0	---	50	122	---	---	---	82
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
13: Berthahill, moist-----	Engelmann spruce----	---	---	---	100	---	---	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	---	---
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
Handoff-----	---	---	---	---	---	---	---	---	---	---
14: Berthahill-----	Engelmann spruce----	104	---	---	100	116	---	---	---	85
	Grand fir-----	69	---	---	50	93	---	---	---	114
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	70	---	---	50	61	---	---	---	103
	Subalpine fir-----	101	---	---	100	111	---	---	---	85
	Western hemlock-----	---	---	---	100	---	---	---	---	---
	Western larch-----	42	---	---	50	50	---	---	---	70

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
14: Handoff-----	---	---	---	---	---	---	---	---	---	
15: Berthahill-----	Engelmann spruce---	104	---	---	---	100	---	116	85	
	Grand fir-----	69	---	---	---	50	---	93	114	
	Lodgepole pine---	---	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	70	---	---	---	50	---	61	103	
	Subalpine fir-----	101	---	---	---	100	---	111	85	
	Western hemlock---	---	---	---	---	100	---	---	---	
	Western larch-----	42	---	---	---	50	---	50	70	
Shattuck-----	Engelmann spruce---	---	---	---	---	100	---	---	---	
	Grand fir-----	91	---	---	---	50	---	135	95	
	Lodgepole pine---	---	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	87	---	---	---	50	---	86	96	
	Subalpine fir-----	---	---	---	---	100	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	
	Western redcedar---	---	---	---	---	100	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	
16: Bigtalk, cool-----	Grand fir-----	---	---	---	---	50	---	---	---	
	Lodgepole pine---	---	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	---	50	---	---	---	
	Subalpine fir-----	---	---	---	---	100	---	---	---	
	Western hemlock---	---	---	---	---	100	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	
	Western redcedar---	---	---	---	---	100	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	
Bigtalk, wet-----	Engelmann spruce---	---	---	---	---	100	---	---	---	
	Grand fir-----	---	---	---	---	50	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	---	50	---	---	---	
	Subalpine fir-----	---	---	---	---	100	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	
	Western redcedar---	---	---	---	---	100	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	



Table 12.-Forest Productivity—Continued

Map symbol and soil name		Potential productivity									
		Common trees		Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
17: Bigtalk											
		Engelmann spruce	---	---	---	100	---	---	---	---	
		Grand fir	121	---	---	50	---	195	77	---	
		Ponderosa pine	---	---	---	100	---	---	---	---	
		Rocky Mountain Douglas-fir	110	4.0	---	50	---	160	72	---	
		Western larch	---	---	---	50	---	---	---	---	
18: Bigtalk, cool		Western white pine	---	---	---	50	---	---	---	---	
		Grand fir	---	---	---	50	---	---	---	---	
		Lodgepole pine	---	---	---	100	---	---	---	---	
		Rocky Mountain Douglas-fir	---	---	---	50	---	---	---	---	
		Subalpine fir	---	---	---	100	---	---	---	---	
Floodwood, cool		Western hemlock	---	---	---	100	---	---	---	---	
		Western larch	---	---	---	50	---	---	---	---	
		Western redcedar	---	---	---	100	---	---	---	---	
		Western white pine	---	---	---	50	---	---	---	---	
		Grand fir	---	---	---	50	---	---	---	---	
19: Bigtalk, cool		Rocky Mountain Douglas-fir	---	---	---	50	---	---	---	---	
		Western hemlock	---	---	---	100	---	---	---	---	
		Western larch	---	---	---	50	---	---	---	---	
		Western redcedar	---	---	---	100	---	---	---	---	
		Western white pine	---	---	---	50	---	---	---	---	
Bigtalk, cool		Grand fir	---	---	---	50	---	---	---	---	
		Lodgepole pine	---	---	---	100	---	---	---	---	
		Rocky Mountain Douglas-fir	---	---	---	50	---	---	---	---	
		Subalpine fir	---	---	---	100	---	---	---	---	
		Western hemlock	---	---	---	100	---	---	---	---	
		Western larch	---	---	---	50	---	---	---	---	
		Western redcedar	---	---	---	100	---	---	---	---	
		Western white pine	---	---	---	50	---	---	---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
19: Keeler, cool-----	Grand fir-----	99	---	---	50	---	151	85		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western hemlock-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
20: Boulder creek, moist-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	104	7.9	---	50	---	165	85		
	Rocky Mountain Douglas-fir-----	95	12.3	---	50	---	117	84		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
21: Boulder creek-----	Engelmann spruce-----	116	---	---	100	---	138	80		
	Grand fir-----	97	18.9	---	50	---	147	91		
	Rocky Mountain Douglas-fir-----	91	8.8	---	50	---	107	89		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western hemlock-----	---	---	---	100	---	---	---		
	Western larch-----	68	---	---	50	---	97	70		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	83	---	---	50	---	160	100		
22: Boulder creek-----	Engelmann spruce-----	116	---	---	100	---	138	80		
	Grand fir-----	97	18.9	---	50	---	147	91		
	Rocky Mountain Douglas-fir-----	91	8.8	---	50	---	107	89		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western hemlock-----	---	---	---	100	---	---	---		
	Western larch-----	68	---	---	50	---	97	70		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	83	---	---	50	---	160	100		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age
23:										
Bouldercreek, moist----	Engelmann spruce----	---	---	---	---	100	---	---	---	---
	Grand fir-----	106	7.9	50	---	50	---	---	165	85
	Rocky Mountain									
	Douglas-fir-----	95	12.3	50	---	50	---	---	117	84
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	---	---	---	---	50	---	---	---	---
	Western redcedar----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
Brodeer-----	Engelmann spruce----	108	---	---	---	100	---	---	123	85
	Grand fir-----	106	10.4	50	---	50	---	---	165	85
	Rocky Mountain									
	Douglas-fir-----	96	8.6	50	---	50	---	---	120	83
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	84	7.5	50	---	50	---	---	130	70
	Western redcedar----	---	---	---	---	100	---	---	---	---
	Western white pine--	84	---	---	---	50	---	---	162	100
24:										
Bouldercreek-----	Engelmann spruce----	116	---	---	---	100	---	---	138	80
	Grand fir-----	97	18.9	50	---	50	---	---	147	91
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	91	8.8	50	---	50	---	---	107	89
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	68	---	---	---	50	---	---	97	70
	Western redcedar----	---	---	---	---	100	---	---	---	---
	Western white pine--	83	---	---	---	50	---	---	160	100
Brodeer-----	Engelmann spruce----	108	---	---	---	100	---	---	123	85
	Grand fir-----	106	10.4	50	---	50	---	---	165	85
	Rocky Mountain									
	Douglas-fir-----	96	8.6	50	---	50	---	---	120	83
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	84	7.5	50	---	50	---	---	130	70
	Western redcedar----	---	---	---	---	100	---	---	---	---
	Western white pine--	84	---	---	---	50	---	---	162	100

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
		Ft								
25:										
Bouldercreek-----	Engelmann spruce-----	116		---	100	138				80
	Grand fir-----	97	18.9	---	50	147				91
	Lodgepole pine-----	---	---	---	100	---				---
	Rocky Mountain									
	Douglas-fir-----	91	8.6		50	107				89
	Subalpine fir-----	---	---	---	100	---				---
	Western larch-----	68	---	---	50	97				70
	Western redcedar-----	---	---	---	100	---				---
	Western white pine--	83	---	---	50	160				100
Judgetown-----										
	Engelmann spruce-----	---	---	---	100	---				---
	Grand fir-----	99	---	---	50	151				90
	Lodgepole pine-----	---	---	---	100	---				---
	Rocky Mountain									
	Douglas-fir-----	92	---	---	50	109				88
	Subalpine fir-----	---	---	---	100	---				---
	Western larch-----	---	---	---	50	---				---
	Western redcedar-----	---	---	---	100	---				---
	Western white pine--	78	---	---	50	150				100
26:										
Bouldercreek, high precipitation-----										
	Engelmann spruce-----	---	---	---	100	---				---
	Grand fir-----	106	---	---	50	120				83
	Rocky Mountain									
	Douglas-fir-----	96	---	---	50	120				83
	Subalpine fir-----	---	---	---	100	---				---
	Western hemlock-----	---	---	---	100	---				---
	Western larch-----	---	---	---	50	---				---
	Western redcedar-----	---	---	---	100	---				---
	Western white pine--	---	---	---	50	---				---
Marblecreek-----										
	Engelmann spruce-----	---	---	---	100	---				---
	Grand fir-----	88	---	---	50	129				98
	Lodgepole pine-----	---	---	---	100	---				---
	Ponderosa pine-----	---	---	---	100	---				---
	Rocky Mountain									
	Douglas-fir-----	87	---	---	50	97				92
	Western larch-----	---	---	---	50	---				---
	Western white pine--	76	---	---	50	113				70

Table 12.—Forest Productivity—Continued

Potential productivity											
Map symbol and soil name	Common trees	Site index	Site index	Site index	Volume of wood fiber (CMAI)	CMAI age					
		average	stand-age	base age							
				deviation*							
		Ft			Cu ft/ac/yr	Yrs					
27:											
Bouldercreek, cool, dry	Grand fir----- Lodgepole pine Rocky Mountain	86	7.8		125	100					
	Douglas-fir----- Subalpine fir----- Western hemlock----- Western larch----- Western redcedar----- Western white pine--	69	---		59	---					
			---		---	104					
			---		---	---					
			---		---	---					
			---		---	---					
			---		---	---					
		69	---		133	100					
Rettig, cool-----	Engelmann spruce----- Grand fir----- Rocky Mountain	---	---		---	---					
	Douglas-fir----- Subalpine fir----- Western hemlock----- Western larch----- Western redcedar----- Western white pine--	106	---		165	85					
			---		---	---					
		103	---		139	77					
			---		---	---					
		125	---		190	50					
			---		---	---					
			---		---	---					
			---		---	---					
			---		---	---					
28:											
Brequito, dry-----	Engelmann spruce----- Grand fir----- Lodgepole pine----- Ponderosa pine----- Rocky Mountain	---	---		---	---					
	Douglas-fir----- Western larch----- Western white pine--	90	---		104	90					
			---		---	---					
			---		---	---					
			---		---	---					
29:											
Brequito-----	Engelmann spruce----- Grand fir----- Lodgepole pine----- Rocky Mountain	---	---		---	---					
	Douglas-fir----- Subalpine fir----- Western larch----- Western redcedar----- Western white pine--	92	---		137	95					
			---		---	---					
		92	---		109	88					
			---		---	---					
		68	---		97	70					
			---		---	---					
			---		---	---					



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index average	Site index stand-age	Site index deviation*	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age	
31: Lado, dry-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	
	Grand fir-----	107	---	---	50	167	---	---	---	
	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Rocky Mountain Douglas-fir-----	97	---	---	50	122	---	---	---	
	Subalpine fir-----	---	---	---	100	---	---	---	---	
	Western larch-----	---	---	---	50	---	---	---	---	
	Western redcedar-----	---	---	---	100	---	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	---	
32: Brequito-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	
	Grand fir-----	92	---	---	50	137	---	---	95	
	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Rocky Mountain Douglas-fir-----	92	---	---	50	109	---	---	88	
	Subalpine fir-----	---	---	---	100	---	---	---	---	
	Western larch-----	68	---	---	50	97	---	---	70	
	Western redcedar-----	---	---	---	100	---	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	---	
Mushel-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	
	Grand fir-----	102	9.7	---	50	157	---	---	88	
	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Rocky Mountain Douglas-fir-----	97	12.8	---	50	122	---	---	82	
	Subalpine fir-----	---	---	---	100	---	---	---	---	
	Western larch-----	---	---	---	50	---	---	---	---	
	Western redcedar-----	---	---	---	100	---	---	---	---	
	Western white pine--	94	---	---	50	---	---	---	---	
33: Brequito-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	
	Grand fir-----	92	---	---	50	137	---	---	95	
	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Rocky Mountain Douglas-fir-----	92	---	---	50	109	---	---	88	
	Subalpine fir-----	---	---	---	100	---	---	---	---	
	Western larch-----	68	---	---	50	97	---	---	70	
	Western redcedar-----	---	---	---	100	---	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity						
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
		Ft		Yrs	Cu ft/ac/yr	Yrs	
33: Mushel-----	Engelmann spruce-----	---	---	100	---	---	
	Grand fir-----	102	9.7	50	157	88	
	Lodgepole pine-----	---	---	100	---	---	
	Rocky Mountain Douglas-fir-----	97	12.8	50	122	82	
	Subalpine fir-----	---	---	100	---	---	
	Western larch-----	---	---	50	---	---	
	Western redcedar-----	---	---	100	---	---	
	Western white pine--	94	---	50	---	---	
	34: Brodeer, dry-----	Engelmann spruce-----	---	---	100	---	---
Grand fir-----		113	---	50	179	81	
Lodgepole pine-----		---	---	100	---	---	
Rocky Mountain Douglas-fir-----		77	---	50	75	99	
Subalpine fir-----		---	---	100	---	---	
Western larch-----		81	---	50	124	70	
Western redcedar-----		---	---	100	---	---	
Western white pine--		---	---	50	---	---	
Brodeer-----		Engelmann spruce-----	108	---	100	123	85
	Grand fir-----	106	10.4	50	165	85	
	Rocky Mountain Douglas-fir-----	96	8.6	50	120	83	
	Subalpine fir-----	---	---	100	---	---	
	Western larch-----	84	7.5	50	130	70	
	Western redcedar-----	---	---	100	---	---	
	Western white pine--	84	---	50	162	100	
	35: Brodeer-----	Engelmann spruce-----	108	---	100	123	85
		Grand fir-----	106	10.4	50	165	85
Lodgepole pine-----		---	---	100	---	---	
Rocky Mountain Douglas-fir-----		96	8.6	50	120	83	
Subalpine fir-----		---	---	100	---	---	
Western larch-----		84	7.5	50	130	70	
Western redcedar-----		---	---	100	---	---	
Western white pine--		84	---	50	162	100	



Table 12.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index average	Site index standard deviation*	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age	
35: Mushel-----	Engelmann spruce---	---	---	100	---	---	---	---	---	
	Grand fir-----	102	9.7	50	157	88	---	---	---	
	Lodgepole pine---	---	---	100	---	---	---	---	---	
	Rocky Mountain Douglas-fir-----	97	12.8	50	122	82	---	---	---	
	Subalpine fir-----	---	---	100	---	---	---	---	---	
	Western larch-----	---	---	50	---	---	---	---	---	
	Western redcedar---	---	---	100	---	---	---	---	---	
36: Brodeer, warm-----	Western white pine--	94	---	50	---	---	---	---	---	
	Engelmann spruce---	---	---	100	---	---	---	---	---	
	Grand fir-----	117	---	50	187	79	---	---	---	
	Lodgepole pine---	---	---	100	---	---	---	---	---	
	Ponderosa pine-----	---	---	100	---	---	---	---	---	
	Rocky Mountain Douglas-fir-----	88	---	50	99	91	---	---	---	
	Western larch-----	---	---	50	---	---	---	---	---	
Mushel, dry-----	Western white pine--	---	---	50	---	---	---	---	---	
	Engelmann spruce---	---	---	100	---	---	---	---	---	
	Grand fir-----	113	7.5	50	179	81	---	---	---	
	Lodgepole pine---	---	---	100	---	---	---	---	---	
	Ponderosa pine-----	---	---	100	---	---	---	---	---	
	Rocky Mountain Douglas-fir-----	98	12.0	50	125	81	---	---	---	
	Western larch-----	78	---	50	118	70	---	---	---	
37: Brodeer-----	Western white pine--	83	---	50	160	100	---	---	---	
	Engelmann spruce---	108	---	100	123	85	---	---	---	
	Grand fir-----	106	10.4	50	165	85	---	---	---	
	Rocky Mountain Douglas-fir-----	96	8.6	50	120	83	---	---	---	
	Subalpine fir-----	---	---	100	---	---	---	---	---	
	Western larch-----	84	7.5	50	130	70	---	---	---	
	Western redcedar---	---	---	100	---	---	---	---	---	
Western white pine--	84	---	50	162	100	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
37:		Ft								
Bouldercreek-----	Engelmann spruce----	116				138	100	138	80	80
	Grand fir-----	97	18.9			147	50	147	91	91
	Lodgepole pine-----	---	---			---	100	---	---	---
	Rocky Mountain									
	Douglas-fir-----	91	8.8			107	50	107	89	89
	Subalpine fir-----	---	---			---	100	---	---	---
	Western larch-----	68	---			97	50	97	70	70
	Western redcedar-----	---	---			---	100	---	---	---
	Western white pine--	83	---			160	50	160	100	100
38:										
Brodeer-----	Engelmann spruce----	108				123	100	123	85	85
	Grand fir-----	106	10.4			165	50	165	85	85
	Rocky Mountain									
	Douglas-fir-----	96	8.6			120	50	120	83	83
	Subalpine fir-----	---	---			---	100	---	---	---
	Western larch-----	84	7.5			130	50	130	70	70
	Western redcedar-----	---	---			---	100	---	---	---
	Western white pine--	84	---			162	50	162	100	100
Flewsie, dry-----										
	Engelmann spruce----	---				---	100	---	---	---
	Grand fir-----	89				131	50	131	97	97
	Lodgepole pine-----	---	---			---	100	---	---	---
	Rocky Mountain									
	Douglas-fir-----	97				122	50	122	82	82
	Subalpine fir-----	---				---	100	---	---	---
	Western larch-----	---				---	50	---	---	---
	Western redcedar-----	---				---	100	---	---	---
	Western white pine--	---				---	50	---	---	---
39:										
Brodeer-----	Engelmann spruce----	108				123	100	123	85	85
	Grand fir-----	106	10.4			165	50	165	85	85
	Rocky Mountain									
	Douglas-fir-----	96	8.6			120	50	120	83	83
	Subalpine fir-----	---				---	100	---	---	---
	Western larch-----	84	7.5			130	50	130	70	70
	Western redcedar-----	---				---	100	---	---	---
	Western white pine--	84				162	50	162	100	100

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees		Site index	Site index	Site index	Site index	Site index	Site index	Yrs	Cu ft/ac/yr
	aver- age	age	age	ard devia- tion*	base age	base age	base age	base age		Volume of wood fiber (CMAI)
39:										
Lostpete-----	Engelmann spruce----	---	---	---	---	---	---	---	---	---
	Grand fir-----	114	8.6	---	---	---	---	---	100	181
	Rocky Mountain									
	Douglas-fir-----	91	15.6	---	---	---	---	---	50	107
	Subalpine fir-----	---	---	---	---	---	---	---	100	---
	Western larch-----	83	---	---	---	---	---	---	50	126
	Western redcedar-----	---	---	---	---	---	---	---	100	---
	Western white pine--	---	---	---	---	---	---	---	50	---
40:										
Brodeer, moist-----	Engelmann spruce----	108	---	---	---	---	---	---	100	123
	Grand fir-----	106	10.4	---	---	---	---	---	50	165
	Rocky Mountain									
	Douglas-fir-----	96	8.6	---	---	---	---	---	50	120
	Subalpine fir-----	---	---	---	---	---	---	---	100	---
	Western larch-----	84	7.5	---	---	---	---	---	50	130
	Western redcedar-----	---	---	---	---	---	---	---	100	---
	Western white pine--	84	---	---	---	---	---	---	50	162
Lostpete, moist-----	Engelmann spruce----	---	---	---	---	---	---	---	---	---
	Grand fir-----	102	10.4	---	---	---	---	---	100	157
	Subalpine fir-----	---	---	---	---	---	---	---	100	---
	Western larch-----	---	---	---	---	---	---	---	50	---
	Western redcedar-----	---	---	---	---	---	---	---	100	---
	Western white pine--	120	---	---	---	---	---	---	50	---
41:										
Brodeer, dry-----	Engelmann spruce----	---	---	---	---	---	---	---	100	---
	Grand fir-----	113	---	---	---	---	---	---	50	179
	Lodgepole pine-----	---	---	---	---	---	---	---	100	---
	Rocky Mountain									
	Douglas-fir-----	77	---	---	---	---	---	---	50	75
	Subalpine fir-----	---	---	---	---	---	---	---	100	---
	Western larch-----	81	---	---	---	---	---	---	50	124
	Western redcedar-----	---	---	---	---	---	---	---	100	---
	Western white pine--	---	---	---	---	---	---	---	50	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
41: Mushel-----		Ft								
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	102	---	---	50	---	157	88		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	97	---	---	50	---	122	82		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	97	---	---	50	---	---	---		
42: Brodeer-----										
	Engelmann spruce-----	108	---	---	100	---	123	85		
	Grand fir-----	106	10.4	---	50	---	165	85		
	Rocky Mountain Douglas-fir-----	96	8.6	---	50	---	120	83		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	84	7.5	---	50	---	130	70		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	84	---	---	50	---	162	100		
Mushel-----										
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	102	---	---	50	---	157	88		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	97	---	---	50	---	122	82		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	97	---	---	50	---	---	---		
43: Burntcreek-----										
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	105	---	---	50	---	163	83		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
44: Campra-----		Ft								
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	104	---	---	50	---	161	87		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	83	---	---	50	---	88	95		
	Western larch-----	---	---	---	50	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
45: Campra-----										
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	104	---	---	50	---	161	87		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	83	---	---	50	---	88	95		
	Western larch-----	---	---	---	50	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
Sly-----										
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	107	---	---	50	---	167	85		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	132	---	---	100	---	170	40		
	Rocky Mountain Douglas-fir-----	93	---	---	50	---	112	87		
	Western larch-----	---	---	---	50	---	---	---		
	Western white pine--	97	---	---	50	---	---	---		
46: Carlinton-----										
	Grand fir-----	78	21.3	---	50	---	116	106		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	104	11.7	---	100	---	110	40		
	Rocky Mountain Douglas-fir-----	79	13.1	---	50	---	79	98		
	Western larch-----	---	---	---	50	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
		Ft								
47: Carlinton-----	Grand fir-----	78	21.3	50		110	108			
	Lodgepole pine-----	---	---	100		---	---			
	Ponderosa pine-----	104	11.7	100		110	40			
	Rocky Mountain									
	Douglas-fir-----	79	13.1	50		79	98			
	Western larch-----	---	---	50		---	---			
48: Carlinton-----	Grand fir-----	78	21.3	50		110	108			
	Lodgepole pine-----	---	---	100		---	---			
	Ponderosa pine-----	104	11.7	100		110	40			
	Rocky Mountain									
	Douglas-fir-----	79	13.1	50		79	98			
	Western larch-----	---	---	50		---	---			
Kruse-----	Grand fir-----	70	---	50		95	113			
	Lodgepole pine-----	---	---	100		---	---			
	Ponderosa pine-----	108	10.5	100		118	40			
	Rocky Mountain									
	Douglas-fir-----	79	7.6	50		79	98			
	Western larch-----	56	---	50		74	70			
49: Carlinton-----	Grand fir-----	78	---	50		110	108			
	Lodgepole pine-----	---	---	100		---	---			
	Ponderosa pine-----	104	---	100		110	40			
	Rocky Mountain									
	Douglas-fir-----	79	13.1	50		79	98			
	Western larch-----	---	---	50		---	---			
Seddow-----	Engelmann spruce-----	---	---	100		---	---			
	Grand fir-----	76	---	50		106	109			
	Lodgepole pine-----	---	---	100		---	---			
	Ponderosa pine-----	109	---	100		120	40			
	Rocky Mountain									
	Douglas-fir-----	72	2.1	50		65	102			
	Western larch-----	---	---	50		---	---			

Table 12.-Forest Productivity—Continued

Potential productivity									
Map symbol and soil name	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
		Ft			Yrs				
50: Caseycreek-----	Engelmann spruce-----	125	---	---	100		153	80	
	Grand fir-----	99	---	---	50		151	90	
	Lodgepole pine-----	112	---	---	100		101	90	
	Rocky Mountain								
	Douglas-fir-----	83	---	---	50		88	95	
	Subalpine fir-----	---	---	---	100		---	---	
	Western larch-----	---	---	---	50		---	---	
	Western redcedar-----	---	---	---	100		---	---	
	Western white pine-----	---	---	---	50		---	---	
51: Cavendish-----	Lodgepole pine-----	---	---	---	100		---	---	
	Ponderosa pine-----	95	---	---	100		94	40	
	Rocky Mountain								
	Douglas-fir-----	79	---	---	50		79	98	
52: Cavendish-----	Lodgepole pine-----	---	---	---	100		---	---	
	Ponderosa pine-----	95	---	---	100		94	40	
	Rocky Mountain								
	Douglas-fir-----	79	---	---	50		79	98	
Taney-----	Lodgepole pine-----	---	---	---	100		---	---	
	Ponderosa pine-----	107	---	---	100		116	40	
	Rocky Mountain								
	Douglas-fir-----	77	---	---	50		75	99	
53: Cobbler-----	Grand fir-----	---	---	---	50		---	---	
	Lodgepole pine-----	---	---	---	100		---	---	
	Ponderosa pine-----	---	---	---	100		---	---	
	Rocky Mountain								
	Douglas-fir-----	91	16.4	---	50		107	89	
	Western larch-----	---	---	---	50		---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index base	Site index age	Volume of wood fiber (CMAI)	CMAI age			
		age	age	age	age			Yrs	Cu ft/ac/yr	Yrs
53:										
Aldermand-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	91	---	---	---	135	95	50	---	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	82	9.4	---	---	86	96	50	---	---
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
	Western redcedar-----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
54:										
Cobbler-----	Grand fir-----	---	---	---	---	---	---	50	---	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Ponderosa pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	91	16.4	---	---	107	89	50	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
Noil-----	Grand fir-----	104	---	---	---	161	87	50	---	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Ponderosa pine-----	101	---	---	---	104	40	100	---	---
	Rocky Mountain									
	Douglas-fir-----	82	19.0	---	---	86	96	50	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
55:										
Cranberry-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	95	17.0	---	---	143	92	50	---	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	100	6.6	---	---	130	79	50	---	---
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
	Western redcedar-----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age
55: Riswold-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	104	7.9	---	---	50	---	---	161	87
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain Douglas-fir-----	97	10.0	---	---	50	---	---	122	82
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	---	---	---	---	50	---	---	---	---
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
56: Crumarine-----	---	---	---	---	---	---	---	---	---	---
57: Dam-----	---	---	---	---	---	---	---	---	---	---
58: Driscoll-----	Ponderosa pine-----	102	---	---	---	100	---	---	106	40
59: Driscoll-----	Ponderosa pine-----	102	---	---	---	100	---	---	106	40
Larkin-----	Ponderosa pine-----	122	---	---	---	100	---	---	146	40
60: Dullaxe, high elevation	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	108	---	---	---	50	---	---	169	84
	Ponderosa pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain Douglas-fir-----	---	---	---	---	50	---	---	---	---
	Western larch-----	---	---	---	---	50	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
Dullaxe-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	110	5.1	---	---	50	---	---	173	83
	Rocky Mountain Douglas-fir-----	99	---	---	---	50	---	---	127	80
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	---	---	---	---	50	---	---	---	---
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---



Table 12.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees		Site index average	Site index stand-age deviation*	Site index base age	Volume of wood fiber (CMAI)	CMAI age			
		Ft			Yrs	Cu ft/ac/yr	Yrs			
63: Dullaxe-----	Engelmann spruce----	---	---	---	100	---	---			
	Grand fir-----	110	5.1	---	50	173	83			
	Rocky Mountain Douglas-fir-----	99	---	---	50	127	80			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar----	---	---	---	100	---	---			
	Western white pine----	---	---	---	50	---	---			
Brodeer-----	Engelmann spruce----	108	---	---	100	123	85			
	Grand fir-----	106	10.4	---	50	165	85			
	Rocky Mountain Douglas-fir-----	96	8.6	---	50	120	83			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	84	7.5	---	50	130	70			
	Western redcedar----	---	---	---	100	---	---			
	Western white pine--	84	---	---	50	162	100			
64: Dullaxe-----	Engelmann spruce----	---	---	---	100	---	---			
	Grand fir-----	110	5.1	---	50	173	83			
	Rocky Mountain Douglas-fir-----	99	---	---	50	127	80			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar----	---	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			
Judgetown-----	Engelmann spruce----	---	---	---	100	---	---			
	Grand fir-----	99	---	---	50	151	90			
	Lodgepole pine-----	---	---	---	100	---	---			
	Rocky Mountain Douglas-fir-----	92	---	---	50	109	88			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar----	---	---	---	100	---	---			
Western white pine--	78	---	---	50	150	100				

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Volume of wood fiber (CMAI)	CMAI age			
		Ft		Yrs	Cu ft/ac/yr	Yrs				
65:										
Dullaxe-----	Engelmann spruce----	---								
	Grand fir-----	110	5.1	100	---	173	83			
	Rocky Mountain									
	Douglas-fir-----	99	---	50	---	127	80			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	---	---	50	---	---	---			
	Western redcedar----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
Judgetown, moist-----	Engelmann spruce----	---								
	Grand fir-----	133	---	100	---	---	---			
	Rocky Mountain									
	Douglas-fir-----	111	---	50	---	---	---			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	---	---	50	---	---	---			
	Western redcedar----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
66:										
Dullaxe-----	Engelmann spruce----	---								
	Grand fir-----	110	5.1	100	---	173	83			
	Rocky Mountain									
	Douglas-fir-----	99	---	50	---	127	80			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	---	---	50	---	---	---			
	Western redcedar----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
Jury, moist-----	Engelmann spruce----	---								
	Grand fir-----	109	---	100	---	171	84			
	Subalpine fir-----	---	---	50	---	---	---			
	Western larch-----	---	---	100	---	---	---			
	Western redcedar----	---	---	50	---	---	---			
	Western white pine--	---	---	100	---	---	---			
67:										
Dumps, wood slash-----	---	---	---			---	---			

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index aver-	Site index stand-	Site index base	Site index age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs
68:		Ft								
Dworshak-----	Engelmann spruce----	---	---	---	---	---	---	100	---	---
	Grand fir-----	83	2.5	---	---	---	120	50	120	104
	Lodgepole pine----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	93	---	---	---	---	112	50	112	87
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	72	---	---	---	---	105	50	105	70
	Western redcedar----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
69:										
Dworshak-----	Engelmann spruce----	---	---	---	---	---	---	100	---	---
	Grand fir-----	83	2.5	---	---	---	120	50	120	104
	Lodgepole pine----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	93	---	---	---	---	112	50	112	87
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	72	---	---	---	---	105	50	105	70
	Western redcedar----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
Brequito-----										
	Engelmann spruce----	---	---	---	---	---	---	100	---	---
	Grand fir-----	92	---	---	---	---	137	50	137	95
	Lodgepole pine----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	92	---	---	---	---	109	50	109	88
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	68	---	---	---	---	97	50	97	70
	Western redcedar----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
70:										
Elkberry-----										
	Engelmann spruce----	---	---	---	---	---	---	100	---	---
	Grand fir-----	107	12.9	---	---	---	167	50	167	85
	Lodgepole pine----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	101	---	---	---	---	133	50	133	78
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
	Western redcedar----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age
70:		Ft								
Elkberry, wet-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	104	16.2	---	50	161	50	161	161	87
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	---	---	---	50	---	50	---	---	---
	Western larch-----	79	---	---	50	120	50	120	120	70
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---
71:										
Elkberry-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	107	12.9	---	50	167	50	167	167	85
	Lodgepole pine-----	---	---	---	100	---	100	---	---	---
	Rocky Mountain Douglas-fir-----	101	---	---	50	133	50	133	133	78
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	---	---	---	50	---	50	---	---	---
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---
Dworshak-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	83	2.5	---	50	120	50	120	120	104
	Lodgepole pine-----	---	---	---	100	---	100	---	---	---
	Rocky Mountain Douglas-fir-----	93	---	---	50	112	50	112	112	87
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	72	---	---	50	105	50	105	105	70
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---
72:										
Elkridge-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	106	---	---	50	165	50	165	165	85
	Lodgepole pine-----	---	---	---	100	---	100	---	---	---
	Rocky Mountain Douglas-fir-----	95	---	---	50	117	50	117	117	84
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	---	---	---	50	---	50	---	---	---
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index aver-	Site index stand-	Site index base	Site age	Volume of wood fiber (CMAI)	CMAI age		
		Ft					Cu ft/ac/yr	Yrs		
72: Riswold-----	Engelmann spruce-----	---	---	---	---	---	---	---		
	Grand fir-----	104	7.9	---	---	---	161	87		
	Lodgepole pine-----	---	---	---	---	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	97	10.0	---	---	---	122	82		
	Subalpine fir-----	---	---	---	---	---	---	---		
	Western larch-----	---	---	---	---	---	---	---		
	Western redcedar-----	---	---	---	---	---	---	---		
	Western white pine--	---	---	---	---	---	---	---		
73: Elkridge-----	Engelmann spruce-----	---	---	---	---	---	---	---		
	Grand fir-----	106	---	---	---	---	165	85		
	Lodgepole pine-----	---	---	---	---	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	95	---	---	---	---	117	84		
	Subalpine fir-----	---	---	---	---	---	---	---		
	Western larch-----	---	---	---	---	---	---	---		
	Western redcedar-----	---	---	---	---	---	---	---		
	Western white pine--	---	---	---	---	---	---	---		
Riswold-----	Engelmann spruce-----	---	---	---	---	---	---	---		
	Grand fir-----	104	7.9	---	---	---	161	87		
	Lodgepole pine-----	---	---	---	---	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	97	10.0	---	---	---	122	82		
	Subalpine fir-----	---	---	---	---	---	---	---		
	Western larch-----	---	---	---	---	---	---	---		
	Western redcedar-----	---	---	---	---	---	---	---		
	Western white pine--	---	---	---	---	---	---	---		
74: Fico, dry-----	Engelmann spruce-----	---	---	---	---	---	---	---		
	Grand fir-----	---	---	---	---	---	---	---		
	Lodgepole pine-----	---	---	---	---	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	---	---	---	---	---	---	---		
	Subalpine fir-----	---	---	---	---	---	---	---		
	Western larch-----	---	---	---	---	---	---	---		
	Western redcedar-----	---	---	---	---	---	---	---		
	Western white pine--	---	---	---	---	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Volume of wood fiber (CMAI)
		aver- age	age	ard devia- tion*	base age	base age	base age	base age	base age	
		Ft	Yrs	Cu ft/ac/yr	Yrs	Yrs	Yrs	Yrs	Yrs	
74: Huchert, warm-----	Engelmann spruce-----	---	---	---	---	---	---	---	---	---
	Grand fir-----	---	---	---	---	---	---	---	---	---
	Lodgepole pine-----	---	---	---	---	---	---	---	---	---
	Rocky Mountain	---	---	---	---	---	---	---	---	---
	Douglas-fir-----	---	---	---	---	---	---	---	---	---
	Subalpine fir-----	---	---	---	---	---	---	---	---	---
	Western larch-----	---	---	---	---	---	---	---	---	---
	Western white pine--	---	---	---	---	---	---	---	---	---
75: Fico-----	Engelmann spruce-----	100	---	---	---	---	---	---	---	109
	Grand fir-----	---	---	---	---	---	---	---	---	---
	Lodgepole pine-----	---	---	---	---	---	---	---	---	---
	Rocky Mountain	---	---	---	---	---	---	---	---	---
	Douglas-fir-----	95	---	---	---	---	---	---	---	117
	Subalpine fir-----	110	---	---	---	---	---	---	---	127
	Western white pine--	---	---	---	---	---	---	---	---	---
Weitas-----	---	---	---	---	---	---	---	---	---	---
76: Flewsie, high precipitation-----	Engelmann spruce-----	---	---	---	---	---	---	---	---	---
	Grand fir-----	85	---	---	---	---	---	---	---	124
	Rocky Mountain	---	---	---	---	---	---	---	---	---
	Douglas-fir-----	85	---	---	---	---	---	---	---	92
	Subalpine fir-----	---	---	---	---	---	---	---	---	---
	Western larch-----	---	---	---	---	---	---	---	---	---
	Western redcedar----	---	---	---	---	---	---	---	---	---
	Western white pine--	---	---	---	---	---	---	---	---	---
77: Flewsie, low precipitation-----	Engelmann spruce-----	---	---	---	---	---	---	---	---	---
	Grand fir-----	93	---	---	---	---	---	---	---	139
	Lodgepole pine-----	---	---	---	---	---	---	---	---	---
	Ponderosa pine-----	---	---	---	---	---	---	---	---	---
	Rocky Mountain	---	---	---	---	---	---	---	---	---
	Douglas-fir-----	98	---	---	---	---	---	---	---	125
	Western larch-----	96	---	---	---	---	---	---	---	156
	Western white pine--	93	---	---	---	---	---	---	---	175



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	CMAI age			
		Ft			Yrs	Cu ft/ac/yr	Yrs			
77: Flewsie, dry-----	Engelmann spruce-----	---	---	---	100	---	---			
	Grand fir-----	89	---	---	50	131	97			
	Lodgepole pine-----	---	---	---	100	---	---			
	Rocky Mountain Douglas-fir-----	97	---	---	50	122	82			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar-----	---	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			
78: Floodwood-----	Engelmann spruce-----	---	---	---	100	---	---			
	Grand fir-----	106	---	---	50	165	85			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar-----	---	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			
79: Floodwood, warm-----	Engelmann spruce-----	---	---	---	100	---	---			
	Grand fir-----	104	---	---	50	161	87			
	Rocky Mountain Douglas-fir-----	107	---	---	50	151	74			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar-----	---	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			
Keeler-----	Engelmann spruce-----	---	---	---	100	---	---			
	Grand fir-----	107	14.0	---	50	167	85			
	Lodgepole pine-----	---	---	---	100	---	---			
	Rocky Mountain Douglas-fir-----	99	7.0	---	50	127	80			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	81	---	---	50	124	70			
	Western redcedar-----	128	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Volume of wood fiber (CMAI)	CMAI age			
		Ft			Yrs	Cu ft/ac/yr	Yrs			
80:										
Floodwood-----	Engelmann spruce----	---	---	---	100	---	---			
	Grand fir-----	106	---	---	50	165	85			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar----	---	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			
Keeler, warm-----	Engelmann spruce----	---	---	---	100	---	---			
	Grand fir-----	107	---	---	50	167	85			
	Lodgepole pine-----	---	---	---	100	---	---			
	Rocky Mountain									
	Douglas-fir-----	99	---	---	50	127	80			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	81	---	---	50	124	70			
	Western redcedar----	128	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			
81:										
Floodwood-----	Engelmann spruce----	---	---	---	100	---	---			
	Grand fir-----	106	---	---	50	165	85			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	---	---	---	50	---	---			
	Western redcedar----	---	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			
Keeler, warm-----	Engelmann spruce----	---	---	---	100	---	---			
	Grand fir-----	107	---	---	50	167	85			
	Lodgepole pine-----	---	---	---	100	---	---			
	Rocky Mountain									
	Douglas-fir-----	99	---	---	50	127	80			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	81	---	---	50	124	70			
	Western redcedar----	128	---	---	100	---	---			
	Western white pine--	---	---	---	50	---	---			

Table 12.-Forest Productivity—Continued

Potential productivity									
Map symbol and soil name	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
82: Flumecreek-----	Engelmann spruce-----	---	---	---	100	---	---	---	
	Grand fir-----	80	---	---	50	---	114	107	
	Lodgepole pine-----	---	---	---	100	---	---	---	
	Ponderosa pine-----	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	82	---	---	50	82	96	96	
	Western larch-----	---	---	---	50	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	
83: Flumecreek-----	Engelmann spruce-----	---	---	---	100	---	---	---	
	Grand fir-----	80	---	---	50	114	107	107	
	Lodgepole pine-----	---	---	---	100	---	---	---	
	Ponderosa pine-----	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	82	---	---	50	82	96	96	
	Western larch-----	---	---	---	50	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	
Stepoff-----	---	---	---	---	---	---	---	---	
Dworshak, dry-----	Engelmann spruce-----	---	---	---	100	---	---	---	
	Grand fir-----	---	---	---	50	---	---	---	
	Ponderosa pine-----	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	
	Western larch-----	---	---	---	50	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	
84: Fordcreek-----	Ponderosa pine-----	100	10.0	10.0	100	102	40	40	
85: Fordcreek-----	Ponderosa pine-----	100	10.0	10.0	100	102	40	40	

Table 12.-Forest Productivity—Continued

Map symbol and soil name		Potential productivity								
		Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
86: Garveson, high precipitation-----	Engelmann spruce----	---	---	---	---	100	---	---	---	
	Grand fir-----	---	---	---	---	50	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	---	50	---	---	---	
	Subalpine fir-----	---	---	---	---	100	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	
	Western redcedar----	---	---	---	---	100	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	
	Floodwood-----	Engelmann spruce----	---	---	---	---	100	---	---	
87: Gramil-----	Grand fir-----	106	---	---	---	50	---	165	85	
	Subalpine fir-----	---	---	---	---	100	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	
	Western redcedar----	---	---	---	---	100	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	
	Engelmann spruce----	---	---	---	---	100	---	---	---	
	Grand fir-----	---	---	---	---	50	---	---	---	
	Lodgepole pine-----	---	---	---	---	100	---	---	---	
88: Gramil-----	Ponderosa pine-----	---	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	---	50	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	
	Lewhand-----	---	---	---	---	---	---	---	---	
	Engelmann spruce----	---	---	---	---	100	---	---	---	
	Grand fir-----	---	---	---	---	50	---	---	---	
	Lodgepole pine-----	---	---	---	---	100	---	---	---	
89: Gramil-----	Ponderosa pine-----	---	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	---	50	---	---	---	
	Western larch-----	---	---	---	---	50	---	---	---	
	Western white pine--	---	---	---	---	50	---	---	---	
	Lewhand-----	---	---	---	---	---	---	---	---	
	Engelmann spruce----	---	---	---	---	100	---	---	---	
	Grand fir-----	---	---	---	---	50	---	---	---	
	Lodgepole pine-----	---	---	---	---	100	---	---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index	Site index	Site index	base age	Volume of wood fiber (CMAI)	CMAI age		
		Ft							Yrs	Cu ft/ac/yr
88: Reggear-----	Engelmann spruce----	---	---	---	---	---	---	---	100	---
	Grand fir-----	78	9.7	---	---	---	110	---	50	108
	Lodgepole pine-----	---	---	---	---	---	---	---	100	---
	Ponderosa pine-----	---	---	---	---	---	---	---	100	---
	Rocky Mountain Douglas-fir-----	77	---	---	---	---	75	---	50	99
	Western larch-----	82	---	---	---	---	126	---	50	70
	Western white pine--	---	---	---	---	---	---	---	50	---
89: Grandad-----	Engelmann spruce----	---	---	---	---	---	---	---	100	---
	Grand fir-----	102	9.6	---	---	---	157	---	50	88
	Rocky Mountain Douglas-fir-----	99	---	---	---	---	127	---	50	80
	Subalpine fir-----	---	---	---	---	---	---	---	100	---
	Western larch-----	71	---	---	---	---	103	---	50	70
	Western redcedar----	78	---	---	---	---	---	---	100	---
	Western white pine--	---	---	---	---	---	---	---	50	---
90: Grandad, dry-----	Engelmann spruce----	---	---	---	---	---	---	---	100	---
	Grand fir-----	96	9.9	---	---	---	145	---	50	92
	Lodgepole pine-----	---	---	---	---	---	---	---	100	---
	Rocky Mountain Douglas-fir-----	88	11.6	---	---	---	99	---	50	91
	Subalpine fir-----	---	---	---	---	---	---	---	100	---
	Western larch-----	79	---	---	---	---	120	---	50	70
	Western redcedar----	---	---	---	---	---	---	---	100	---
Grandad-----	Western white pine--	---	---	---	---	---	---	---	50	---
	Engelmann spruce----	---	---	---	---	---	---	---	100	---
	Grand fir-----	102	9.6	---	---	---	157	---	50	88
	Rocky Mountain Douglas-fir-----	99	---	---	---	---	127	---	50	80
	Subalpine fir-----	---	---	---	---	---	---	---	100	---
	Western larch-----	71	---	---	---	---	103	---	50	70
	Western redcedar----	78	---	---	---	---	---	---	100	---
	Western white pine--	---	---	---	---	---	---	---	50	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age
91:		Ft								
Grandad, dry-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	96	9.8	---	---	50	145	---	145	92
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	88	11.6	---	---	50	99	---	99	91
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	79	---	---	---	50	120	---	120	70
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
Grandad-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	102	9.6	---	---	50	157	---	157	88
	Rocky Mountain									
	Douglas-fir-----	99	---	---	---	50	127	---	127	80
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	71	---	---	---	50	103	---	103	70
	Western redcedar-----	78	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
92:										
Grandad-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	102	9.6	---	---	50	157	---	157	88
	Rocky Mountain									
	Douglas-fir-----	99	---	---	---	50	127	---	127	80
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	71	---	---	---	50	103	---	103	70
	Western redcedar-----	78	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
Rettig-----	Engelmann spruce-----	117	---	---	---	100	140	---	140	80
	Grand fir-----	104	3.5	---	---	50	161	---	161	87
	Rocky Mountain									
	Douglas-fir-----	98	---	---	---	50	125	---	125	81
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	---	---	---	---	50	---	---	---	---
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	58	---	---	---	50	115	---	115	100

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees									
	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Site index
	aver- age	age	age	age	age	age	age	age	age	age
	devia- tion*	devia- tion*	devia- tion*	devia- tion*	devia- tion*	devia- tion*	devia- tion*	devia- tion*	devia- tion*	devia- tion*
	Ft	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age				
93:										
Grandad, wet-----	Grand fir-----	98	---	50	149	90				
	Rocky Mountain									
	Douglas-fir-----	---	---	50	---	---				
	Western hemlock-----	---	---	100	---	---				
	Western larch-----	---	---	50	---	---				
	Western redcedar-----	---	---	100	---	---				
	Western white pine--	---	---	50	---	---				
Rettig, wet-----	Grand fir-----	---	---	50	---	---				
	Rocky Mountain									
	Douglas-fir-----	---	---	50	---	---				
	Western hemlock-----	---	---	100	---	---				
	Western larch-----	---	---	50	---	---				
	Western redcedar-----	---	---	100	---	---				
	Western white pine--	---	---	50	---	---				
94:										
Grandad, dry-----	Engelmann spruce-----	---	---	100	---	---				
	Grand fir-----	96	9.9	50	145	92				
	Lodgepole pine-----	---	---	100	---	---				
	Rocky Mountain									
	Douglas-fir-----	88	11.6	50	99	91				
	Subalpine fir-----	---	---	100	---	---				
	Western larch-----	79	---	50	120	70				
	Western redcedar-----	---	---	100	---	---				
	Western white pine--	---	---	50	---	---				
Scand-----	Engelmann spruce-----	---	---	100	---	---				
	Grand fir-----	84	12.1	50	122	103				
	Lodgepole pine-----	---	---	100	---	---				
	Rocky Mountain									
	Douglas-fir-----	79	9.4	50	79	98				
	Subalpine fir-----	---	---	100	---	---				
	Western larch-----	---	---	50	---	---				
	Western redcedar-----	---	---	100	---	---				
	Western white pine--	---	---	50	---	---				

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index base	Site index age	Volume of wood fiber (CMAI)	CMAI age			
		age	age	age	age			Yrs	Cu ft/ac/yr	Yrs
95:										
Grangemont-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	90	---	---	---	133	---	50	133	96
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	85	---	---	---	92	94	50	92	---
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
	Western redcedar-----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
Kauder-----	Engelmann spruce-----	78	---	---	---	73	100	100	73	---
	Grand fir-----	100	13.5	---	---	153	89	50	153	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	93	10.2	---	---	112	87	50	112	---
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	71	---	---	---	103	70	50	103	---
	Western redcedar-----	---	---	---	---	---	---	100	---	---
	Western white pine--	79	---	---	---	152	100	50	152	---
96:										
Grangemont, dry-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	97	10.0	---	---	147	91	50	147	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Ponderosa pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	91	---	---	---	107	89	50	107	---
	Western larch-----	---	---	---	---	---	---	50	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
Kauder, dry-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	93	15.1	---	---	139	94	50	139	---
	Lodgepole pine-----	122	---	---	---	111	90	100	111	---
	Ponderosa pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	85	9.2	---	---	92	94	50	92	---
	Western larch-----	70	---	---	---	101	70	50	101	---
	Western white pine--	---	---	---	---	---	---	50	---	---



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
97: Grangemont-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	90	---	---	50	---	133	96		
	Rocky Mountain Douglas-fir-----	85	---	---	50	---	92	94		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
	Kauder, moist-----	Engelmann spruce-----	---	---	---	100	---	---	---	
Grand fir-----		114	6.4	---	50	---	181	81		
Rocky Mountain Douglas-fir-----		99	5.0	---	50	---	127	80		
Subalpine fir-----		---	---	---	100	---	---	---		
Western larch-----		86	---	---	50	---	134	70		
Western redcedar-----		---	---	---	100	---	---	---		
Western white pine--		---	---	---	50	---	---	---		
98: Grangemont, wet-----		Engelmann spruce-----	120	---	---	100	---	145	80	
	Grand fir-----	96	8.2	---	50	---	145	92		
	Rocky Mountain Douglas-fir-----	96	14.8	---	50	---	120	83		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
	Riswold-----	Engelmann spruce-----	---	---	---	100	---	---	---	
Grand fir-----		104	7.9	---	50	---	161	87		
Lodgepole pine-----		---	---	---	100	---	---	---		
Rocky Mountain Douglas-fir-----		97	10.0	---	50	---	122	82		
Subalpine fir-----		---	---	---	100	---	---	---		
Western larch-----		---	---	---	50	---	---	---		
Western redcedar-----		---	---	---	100	---	---	---		
Western white pine--		---	---	---	50	---	---	---		
99: Grasshopper-----	---	---	---	---	---	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age	
100: Gwin-----	---	---	---	---		---		---	---	
Kettenbach-----	---	---	---	---		---		---	---	
101: Gwin-----	---	---	---	---		---		---	---	
Kettenbach-----	---	---	---	---		---		---	---	
Keuterville-----	Ponderosa pine----	95	---	---	100	94	40			
102: Hildebrand-----	Engelmann spruce----	---	---	---	100	---		---	---	
	Grand fir-----	---	---	---	50	---		---	---	
	Lodgepole pine----	---	---	---	100	---		---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---		---	---	
	Subalpine fir-----	---	---	---	100	---		---	---	
	Western larch-----	---	---	---	50	---		---	---	
	Western redcedar----	---	---	---	100	---		---	---	
	Western white pine--	---	---	---	50	---		---	---	
Spacecreek, dry-----	Engelmann spruce----	---	---	---	100	---		---	---	
	Grand fir-----	---	---	---	50	---		---	---	
	Lodgepole pine----	---	---	---	100	---		---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---		---	---	
	Subalpine fir-----	---	---	---	100	---		---	---	
	Western larch-----	---	---	---	50	---		---	---	
	Western redcedar----	---	---	---	100	---		---	---	
	Western white pine--	---	---	---	50	---		---	---	
103: Hubub, wet-----	Grand fir-----	---	---	---	50	---		---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---		---	---	
	Western hemlock-----	---	---	---	100	---		---	---	
	Western larch-----	---	---	---	50	---		---	---	
	Western redcedar----	---	---	---	100	---		---	---	
	Western white pine--	---	---	---	50	---		---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
104: Hubub, wet-----	Grand fir-----	---	---	---	50	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	---	---
	Western hemlock-----	---	---	---	100	---	---	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
Dworshak-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	---
	Grand fir-----	83	2.5	---	50	120	104	104	104	104
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	93	---	---	50	112	87	87	87	87
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	72	---	---	50	105	70	70	70	70
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
105: Hubub-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	---
	Grand fir-----	108	14.6	---	50	169	84	84	84	84
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	89	---	---	50	102	91	91	91	91
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	89	---	---	50	140	40	40	40	40
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
Lostpete-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	---
	Grand fir-----	114	---	---	50	181	81	81	81	81
	Rocky Mountain Douglas-fir-----	91	---	---	50	107	89	89	89	89
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	83	---	---	50	126	70	70	70	70
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees		Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
106: Hucberit-----	Engelmann spruce----	86	---	---	---	85	100	---	100	95
	Lodgepole pine-----	---	---	---	---	---	100	---	---	---
	Rocky Mountain	58	---	---	---	41	50	---	---	111
	Douglas-fir-----	88	---	---	---	88	100	---	---	90
	Subalpine fir-----	---	---	---	---	---	50	---	---	---
	Western larch-----	---	---	---	---	---	50	---	---	---
	Western white pine--	---	---	---	---	---	---	---	---	---
107: Hucberit-----	Engelmann spruce----	86	---	---	---	85	100	---	---	95
	Lodgepole pine-----	---	---	---	---	---	100	---	---	---
	Rocky Mountain	58	---	---	---	41	50	---	---	111
	Douglas-fir-----	88	---	---	---	88	100	---	---	90
	Subalpine fir-----	---	---	---	---	---	50	---	---	---
	Western larch-----	---	---	---	---	---	50	---	---	---
	Western white pine--	---	---	---	---	---	---	---	---	---
Vaywood, high precipitation-----	Engelmann spruce----	---	---	---	---	---	100	---	---	---
	Lodgepole pine-----	---	---	---	---	---	100	---	---	---
	Rocky Mountain	---	---	---	---	---	50	---	---	---
	Douglas-fir-----	---	---	---	---	---	100	---	---	---
	Subalpine fir-----	---	---	---	---	---	50	---	---	---
	Western larch-----	---	---	---	---	---	50	---	---	---
	Western white pine--	---	---	---	---	---	---	---	---	---
108: Hugus-----	Engelmann spruce----	---	---	---	---	---	100	---	---	---
	Grand fir-----	88	---	---	---	129	50	---	---	70
	Lodgepole pine-----	---	---	---	---	---	100	---	---	---
	Rocky Mountain	86	11.7	50	---	95	50	---	---	93
	Douglas-fir-----	---	---	---	---	---	100	---	---	---
	Subalpine fir-----	---	---	---	---	---	50	---	---	---
	Western larch-----	---	---	---	---	---	100	---	---	---
	Western redcedar----	---	---	---	---	---	---	---	---	---
	Western white pine--	---	---	---	---	---	50	---	---	---

Table 12.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity						
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Volume of wood fiber (CMAI)	Yrs	CMAI age
109: Hugus	Engelmann spruce	---	---	100	---	---	---
	Grand fir	88	---	50	129	70	---
	Lodgepole pine	---	---	100	---	---	---
	Rocky Mountain Douglas-fir	86	11.7	50	95	93	---
	Subalpine fir	---	---	100	---	---	---
	Western larch	---	---	50	---	---	---
	Western redcedar	---	---	100	---	---	---
	Western white pine	---	---	50	---	---	---
110: Hugus, moist	Engelmann spruce	123	---	100	151	80	---
	Grand fir	100	3.2	50	153	88	---
	Rocky Mountain Douglas-fir	88	5.2	50	99	91	---
	Subalpine fir	---	---	100	---	---	---
	Western larch	79	---	50	120	70	---
	Western redcedar	---	---	100	---	---	---
	Western white pine	---	---	50	---	---	---
111: Hugus, high precipitation	Engelmann spruce	123	---	100	151	80	---
	Grand fir	100	3.2	50	153	88	---
	Rocky Mountain Douglas-fir	88	5.2	50	99	91	---
	Subalpine fir	---	---	100	---	---	---
	Western larch	79	---	50	120	70	---
	Western redcedar	---	---	100	---	---	---
	Western white pine	---	---	50	---	---	---
112: Hugus, moist	Engelmann spruce	123	---	100	151	80	---
	Grand fir	100	3.2	50	153	88	---
	Rocky Mountain Douglas-fir	88	5.2	50	99	91	---
	Subalpine fir	---	---	100	---	---	---
	Western larch	79	---	50	120	70	---
	Western redcedar	---	---	100	---	---	---
	Western white pine	---	---	50	---	---	---

Table 12.-Forest Productivity-Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index base	Site index age	Volume of wood fiber (CMAI)	CMAI age			
		age	age	age	age			Yrs	Cu ft/ac/yr	Yrs
112: Hugus-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	88	---	---	---	129	70	50	129	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	86	11.7	50	50	95	93	50	95	---
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
	Western redcedar-----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
113: Hugus-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	88	---	---	---	129	70	50	129	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	86	11.7	50	50	95	93	50	95	---
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	---	---	---	---	---	---	50	---	---
	Western redcedar-----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
Dworshak-----	Engelmann spruce-----	---	---	---	---	---	---	100	---	---
	Grand fir-----	83	2.5	50	50	120	104	50	120	---
	Lodgepole pine-----	---	---	---	---	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	93	---	50	50	112	87	50	112	---
	Subalpine fir-----	---	---	---	---	---	---	100	---	---
	Western larch-----	72	---	50	50	105	70	50	105	---
	Western redcedar-----	---	---	---	---	---	---	100	---	---
	Western white pine--	---	---	---	---	---	---	50	---	---
114: Itzee-----	Ponderosa pine-----	104	---	---	---	110	40	100	110	---
115: Jacket-----	Ponderosa pine-----	114	---	---	---	128	40	100	128	---
116: Jacket-----	Ponderosa pine-----	114	---	---	---	128	40	100	128	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
117: Jacket-----	Ponderosa pine-----	114	---	---	100	---	128	40		
Wellsbench-----	---	---	---	---	---	---	---	---		
118: Jacot-----	Grand fir-----	82	---	---	50	---	118	105		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	81	---	---	50	---	86	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western hemlock-----	86	---	---	100	---	---	---		
	Western larch-----	70	---	---	50	---	100	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	75	---	---	50	---	143	---		
Garveson-----	Grand fir-----	83	---	---	50	---	120	104		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	92	---	---	50	---	109	88		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western hemlock-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
119: Jacot-----	Grand fir-----	82	---	---	50	---	118	105		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	81	---	---	50	---	86	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western hemlock-----	86	---	---	100	---	---	---		
	Western larch-----	70	---	---	50	---	100	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	75	---	---	50	---	143	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
119: Garveson-----	Grand fir-----	83	---	---	50	120	104	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	92	---	---	50	109	88	---	---	---
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western hemlock-----	---	---	---	100	---	---	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
120: Jaype-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	---
	Grand fir-----	105	9.1	---	50	163	86	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	99	14.7	---	50	127	80	---	---	---
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	80	---	---	50	122	70	---	---	---
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	117	---	---	50	---	---	---	---	---
Revling-----	Engelmann spruce-----	124	---	---	100	---	---	---	---	---
	Grand fir-----	103	9.6	---	50	159	87	---	---	---
	Rocky Mountain Douglas-fir-----	93	---	---	50	112	87	---	---	---
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western redcedar-----	---	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
121: Jaype, dry-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	---
	Grand fir-----	102	---	---	50	157	88	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Ponderosa pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	100	---	---	50	130	79	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
121: Revling, dry-----		Ft								
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	97	5.3	50	50	147	147	91		
	Lodgepole pine-----	122	---	---	100	111	111	90		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	92	10.2	50	50	109	109	88		
	Western larch-----	75	9.0	50	50	111	111	70		
	Western white pine--	82	---	---	50	158	158	100		
122: Jaype-----										
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	105	9.1	50	50	163	163	86		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	99	14.7	50	50	127	127	80		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	80	---	---	50	122	122	70		
	Western redcedar---	---	---	---	100	---	---	---		
	Western white pine--	117	---	---	50	---	---	---		
Statemeadow-----										
	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	97	---	---	50	147	147	91		
	Lodgepole pine-----	110	---	---	100	99	99	90		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	73	---	---	50	76	76	101		
	Western larch-----	---	---	---	50	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
123: Joel-----										
	Ponderosa pine-----	106	---	---	100	114	114	114		
	Rocky Mountain Douglas-fir-----	76	---	---	50	73	73	99		
Setters-----										
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	101	5.5	100	100	104	104	40		
	Rocky Mountain Douglas-fir-----	76	6.1	50	50	73	73	99		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age
124: Johnson	Ponderosa pine----- Rocky Mountain Douglas-fir-----	99 82		7.2 7.0	100 50		101 86		101 86	40 96
125: Johnson	Ponderosa pine----- Rocky Mountain Douglas-fir-----	99 82		7.2 7.0	100 50		101 86		101 86	40 96
Swayne	Ponderosa pine----- Rocky Mountain Douglas-fir-----	105 80		10.1 ---	100 50		112 81		112 81	40 97
126: Johnson	Ponderosa pine----- Rocky Mountain Douglas-fir-----	99 82		7.2 7.0	100 50		101 86		101 86	40 96
Swayne	Ponderosa pine----- Rocky Mountain Douglas-fir-----	105 80		10.1 ---	100 50		112 81		112 81	40 97
127: Johnson	Ponderosa pine----- Rocky Mountain Douglas-fir-----	99 82		7.2 7.0	100 50		101 86		101 86	40 96
Texas creek	Ponderosa pine----- Rocky Mountain Douglas-fir-----	105 80		10.1 ---	100 50		112 81		112 81	40 97
128: Jury	Ponderosa pine----- Rocky Mountain Douglas-fir-----	99 82		7.2 7.0	100 50		101 86		101 86	40 96
	Lodgepole pine----- Ponderosa pine----- Rocky Mountain Douglas-fir-----	--- --- --- ---		--- --- --- ---	100 100 50		---		---	---
	Engelmann spruce----- Grand fir----- Rocky Mountain Douglas-fir----- Subalpine fir----- Western larch----- Western redcedar----- Western white pine--	101 101 90 --- 86 --- 71		--- 11.5 7.2 --- --- --- ---	100 50 50 100 50 100 50		111 155 104 --- 134 --- 147		111 155 104 --- 134 --- 147	85 88 90 --- 79 --- 100

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
129: Jury-----	Engelmann spruce----	101	---	---	100	111	85			
	Grand fir-----	101	---	---	50	155	88			
	Rocky Mountain Douglas-fir-----	90	7.2	---	50	104	90			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	86	---	---	50	134	79			
	Western redcedar-----	---	---	---	100	---	---			
	Western white pine--	71	---	---	50	147	100			
130: Jury, cold-----	Engelmann spruce----	80	---	---	100	76	100			
	Grand fir-----	101	19.8	---	50	155	88			
	Ponderosa pine-----	---	---	---	100	---	---			
	Rocky Mountain Douglas-fir-----	96	15.1	---	50	120	83			
	Western larch-----	---	---	---	50	---	---			
	Western white pine--	---	---	---	50	---	---			
131: Jury-----	Engelmann spruce----	101	---	---	100	111	85			
	Grand fir-----	101	11.5	---	50	155	88			
	Rocky Mountain Douglas-fir-----	90	7.2	---	50	104	90			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	86	---	---	50	134	79			
	Western redcedar-----	---	---	---	100	---	---			
	Western white pine--	71	---	---	50	147	100			
Weitas-----	---	---	---	---	---	---	---			
132: Jury-----	Engelmann spruce----	101	---	---	100	111	85			
	Grand fir-----	101	11.5	---	50	155	88			
	Rocky Mountain Douglas-fir-----	90	7.2	---	50	104	90			
	Subalpine fir-----	---	---	---	100	---	---			
	Western larch-----	86	---	---	50	134	79			
	Western redcedar-----	---	---	---	100	---	---			
	Western white pine--	71	---	---	50	147	100			
Weitas-----	---	---	---	---	---	---	---			

Table 12.—Forest Productivity—Continued

Map symbol and soil name		Potential productivity						
		Common trees	Site index average	Site index standard deviation*	Site index base age	Volume of wood fiber (CMAI)	CMAI age	
133: Kauder	Engelmann spruce	78	---	---	100	73	100	
	Grand fir	100	13.5	---	50	153	89	
	Lodgepole pine	---	---	---	100	---	---	
	Rocky Mountain Douglas-fir	93	10.2	---	50	112	87	
	Subalpine fir	---	---	---	100	---	---	
	Western larch	71	---	---	50	103	70	
	Western redcedar	---	---	---	100	---	---	
	Western white pine	79	---	---	50	152	100	
	134: Keeler, dry	Engelmann spruce	---	---	---	100	---	---
Grand fir		116	9.3	---	50	185	80	
Lodgepole pine		---	---	---	100	---	---	
Ponderosa pine		---	---	---	100	---	---	
Rocky Mountain Douglas-fir		103	4.6	---	50	139	77	
Western larch		---	---	---	50	---	---	
Western white pine		---	---	---	50	---	---	
Engelmann spruce		---	---	---	100	---	---	
Grand fir		107	14.0	---	50	167	85	
135: Keeler, moist	Lodgepole pine	---	---	---	100	---	---	
	Rocky Mountain Douglas-fir	99	7.0	---	50	127	80	
	Subalpine fir	---	---	---	100	---	---	
	Western larch	81	---	---	50	124	70	
	Western redcedar	128	---	---	100	---	---	
	Western white pine	---	---	---	50	---	---	
	Engelmann spruce	---	---	---	100	---	---	
	Grand fir	115	---	---	50	183	80	
	Rocky Mountain Douglas-fir	97	---	---	50	122	82	
Subalpine fir	---	---	---	100	---	---		
Western larch	---	---	---	50	---	---		
Western redcedar	---	---	---	100	---	---		
Western white pine	---	---	---	50	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index base	Site index age	Volume of wood fiber (CMAI)	CMAI age			
		age	age	age	age			Yrs	Cu ft/ac/yr	Yrs
135:										
Keeler-----	Engelmann spruce-----	---	---	---	100	---	---	100	---	---
	Grand fir-----	107	14.0	---	50	167	85	50	167	---
	Lodgepole pine-----	---	---	---	100	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	99	7.0	---	50	127	80	50	127	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western larch-----	81	---	---	50	124	70	50	124	---
	Western redcedar-----	128	---	---	100	---	---	100	---	---
	Western white pine--	---	---	---	50	---	---	50	---	---
136:										
Keeler-----	Engelmann spruce-----	---	---	---	100	---	---	100	---	---
	Grand fir-----	107	14.0	---	50	167	85	50	167	---
	Lodgepole pine-----	---	---	---	100	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	99	7.0	---	50	127	80	50	127	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western larch-----	81	---	---	50	124	70	50	124	---
	Western redcedar-----	128	---	---	100	---	---	100	---	---
	Western white pine--	---	---	---	50	---	---	50	---	---
Aldermand-----	Engelmann spruce-----	---	---	---	100	---	---	100	---	---
	Grand fir-----	91	---	---	50	135	95	50	135	---
	Lodgepole pine-----	---	---	---	100	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	82	9.4	---	50	86	96	50	86	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western larch-----	---	---	---	50	---	---	50	---	---
	Western redcedar-----	---	---	---	100	---	---	100	---	---
	Western white pine--	---	---	---	50	---	---	50	---	---
137:										
Keeler-----	Grand fir-----	107	14.0	---	50	167	85	50	167	---
	Lodgepole pine-----	---	---	---	100	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	99	7.0	---	50	127	80	50	127	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western hemlock-----	---	---	---	100	---	---	100	---	---
	Western larch-----	81	---	---	50	124	70	50	124	---
	Western redcedar-----	128	---	---	100	---	---	100	---	---
	Western white pine--	---	---	---	50	---	---	50	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
137: Jacot-----	Grand fir----- Lodgepole pine----- Rocky Mountain Douglas-fir----- Subalpine fir----- Western hemlock----- Western larch----- Western redcedar----- Western white pine--	82 -- 81 -- 86 70 -- 75	--- --- --- --- --- --- ---	50 100 50 100 100 50 100 50	---	118 ---	105 ---			
138: Keeler-----	Engelmann spruce----- Grand fir----- Lodgepole pine----- Rocky Mountain Douglas-fir----- Subalpine fir----- Western larch----- Western redcedar----- Western white pine--	-- 107 -- 99 -- 81 128 --	--- 14.0 --- 7.0 --- --- --- ---	100 50 100 50 100 50 100 50	---	---	85 ---			
Lado-----	Engelmann spruce----- Grand fir----- Rocky Mountain Douglas-fir----- Subalpine fir----- Western larch----- Western redcedar----- Western white pine--	-- 103 91 -- 86 -- 55	--- 15.3 10.9 --- --- --- ---	100 50 50 100 50 100 50	---	---	87 89 70 100 100			
139: Kettenbach-----	---	--	---	---	---	---	---			
Gwin-----	---	--	---	---	---	---	---			
Rock outcrop-----	---	--	---	---	---	---	---			
140: Kettenbach-----	---	--	---	---	---	---	---			
Keuterville-----	Ponderosa pine-----	95	---	---	100	94	40			

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- age devia- tion*	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age		
141: Keuterville-----	Ponderosa pine-----	95	---	100	94	40	94	40		
142: Keuterville-----	Ponderosa pine-----	95	---	100	94	40	94	40		
143: Keuterville-----	Ponderosa pine-----	95	---	100	94	40	94	40		
Rock outcrop-----	---	---	---	---	---	---	---	---		
144: Klickson-----	Ponderosa pine----- Rocky Mountain Douglas-fir-----	100 86	6.8 8.9	100 50	102 95	40 93	102 95	40 93		
145: Klickson-----	Ponderosa pine----- Rocky Mountain Douglas-fir-----	100 86	6.8 8.9	100 50	102 95	40 93	102 95	40 93		
146: Klickson-----	Ponderosa pine----- Rocky Mountain Douglas-fir-----	100 86	6.8 8.9	100 50	102 95	40 93	102 95	40 93		
Agatha-----	Grand fir----- Lodgepole pine----- Ponderosa pine----- Rocky Mountain Douglas-fir----- Western larch-----	81 --- --- 76 ---	5.3 --- --- --- ---	50 100 100 50 50	116 --- --- 75 ---	106 --- --- 99 ---	116 --- --- 75 ---	106 --- --- 99 ---		
147: Klickson-----	Ponderosa pine----- Rocky Mountain Douglas-fir-----	100 86	6.8 8.9	100 50	102 95	40 93	102 95	40 93		
Kettenbach-----	---	---	---	---	---	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
148: Klickson-----	Ponderosa pine----- Rocky Mountain Douglas-fir-----	100 86	6.8 8.9	100 50	100 50	102 95	102 95	40 93		
Rock outcrop-----	---	---	---	---	---	---	---	---		
Kettenbach-----	---	---	---	---	---	---	---	---		
149: Konkol-----	Engelmann spruce----- Grand fir----- Lodgepole pine----- Rocky Mountain Douglas-fir----- Subalpine fir----- Western larch----- Western redcedar----- Western white pine-----	--- 105 --- 103 --- --- --- 125	--- 8.0 --- 7.0 --- --- --- ---	100 50 100 50 100 50 100 50	100 50 100 50	--- 163 --- 139 --- --- --- ---	--- 163 --- 139 --- --- --- ---	--- 86 --- 77 --- --- --- ---		
Revling-----	Engelmann spruce----- Grand fir----- Rocky Mountain Douglas-fir----- Subalpine fir----- Western larch----- Western redcedar----- Western white pine-----	124 103 93 --- --- --- ---	--- 9.6 --- --- --- --- ---	100 50 50 100 100 100 50	100 50 50 100 100 100 50	--- 159 112 --- --- --- ---	--- 159 112 --- --- --- ---	--- 87 87 --- --- --- ---		
150: Kooskia-----	Ponderosa pine----- Rocky Mountain Douglas-fir-----	105 73	--- ---	100 50	100 50	112 67	112 67	40 101		
151: Kooskia-----	Ponderosa pine----- Rocky Mountain Douglas-fir-----	105 73	--- ---	100 50	100 50	112 67	112 67	40 101		



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
152: Kruise-----	Grand fir-----	70	---	---	50	95	113	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	108	10.5	100	100	118	40	---		
	Rocky Mountain									
	Douglas-fir-----	79	7.6	50	50	79	98	---		
	Western larch-----	56	---	50	50	74	70	---		
153: Kruise-----	Grand fir-----	70	---	---	50	95	113	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	108	10.5	100	100	118	40	---		
	Rocky Mountain									
	Douglas-fir-----	79	7.6	50	50	79	98	---		
	Western larch-----	56	---	50	50	74	70	---		
154: Kruise-----	Grand fir-----	70	---	---	50	95	113	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	108	10.5	100	100	118	40	---		
	Rocky Mountain									
	Douglas-fir-----	79	7.6	50	50	79	98	---		
	Western larch-----	56	---	50	50	74	70	---		
Aldermand-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	91	---	---	50	135	95	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	82	9.4	50	50	86	96	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine-----	---	---	---	50	---	---	---		
155: Kruise-----	Grand fir-----	70	---	---	50	95	113	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	108	10.5	100	100	118	40	---		
	Rocky Mountain									
	Douglas-fir-----	79	7.6	50	50	79	98	---		
	Western larch-----	56	---	50	50	74	70	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Volume of wood fiber (CMAI)	CMAI age			
		Ft		Yrs	Cu ft/ac/yr	Yrs				
155: Aldermand-----	Engelmann spruce-----	---	---	100	---	---	---			
	Grand fir-----	91	---	50	135	95	---			
	Lodgepole pine-----	---	---	100	---	---	---			
	Rocky Mountain Douglas-fir-----	82	9.4	50	86	96	---			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	---	---	50	---	---	---			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
156: Kruise-----	Grand fir-----	70	---	50	95	113	---			
	Lodgepole pine-----	---	---	100	---	---	---			
	Ponderosa pine-----	108	10.5	100	118	40	---			
	Rocky Mountain Douglas-fir-----	79	7.6	50	79	98	---			
	Western larch-----	56	---	50	74	70	---			
McCrosket, dry-----	Ponderosa pine-----	111	---	100	124	40	---			
	Rocky Mountain Douglas-fir-----	---	---	50	---	---	---			
157: Kruise-----	Grand fir-----	70	---	50	95	113	---			
	Lodgepole pine-----	---	---	100	---	---	---			
	Ponderosa pine-----	108	10.5	100	118	40	---			
	Rocky Mountain Douglas-fir-----	79	7.6	50	79	98	---			
	Western larch-----	56	---	50	74	70	---			
Noil-----	Grand fir-----	104	---	50	161	87	---			
	Lodgepole pine-----	---	---	100	---	---	---			
	Ponderosa pine-----	101	---	100	104	40	---			
	Rocky Mountain Douglas-fir-----	82	19.0	50	86	96	---			
	Western larch-----	---	---	50	---	---	---			

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
158: Kruse-----	Grand fir-----	70	---	---	50	95	113	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	108	10.5	---	100	118	40	---		
	Rocky Mountain Douglas-fir-----	79	7.6	---	50	79	98	---		
	Western larch-----	56	---	---	50	74	70	---		
Teakean-----	Grand fir-----	---	---	---	50	---	---	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	111	---	---	100	124	40	---		
	Rocky Mountain Douglas-fir-----	74	---	---	50	69	101	---		
	Western larch-----	---	---	---	50	---	---	---		
159: Larkin-----	Ponderosa pine-----	122	---	---	100	146	40	---		
Driscoll-----	Ponderosa pine-----	102	---	---	100	106	40	---		
160: Lebaron-----	---	---	---	---	---	---	---	---		
Latahco-----	---	---	---	---	---	---	---	---		
161: Lewhand-----	---	---	---	---	---	---	---	---		
Burntcreek-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	105	---	---	50	163	83	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
162: Lewhand-----	---	---	---	---	---	---	---	---		
Teneb-----	---	---	---	---	---	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
163: Longbar-----	Engelmann spruce----	---	---	---	100	---	---	---	---	---
	Grand fir-----	---	---	---	50	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
Bigtalk-----	Engelmann spruce----	---	---	---	100	---	---	---	---	---
	Grand fir-----	121	---	---	50	195	77	---	---	---
	Ponderosa pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	110	4.0	---	50	160	72	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
164: Longbar-----	Engelmann spruce----	---	---	---	100	---	---	---	---	---
	Grand fir-----	---	---	---	50	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
Bigtalk-----	Engelmann spruce----	---	---	---	100	---	---	---	---	---
	Grand fir-----	121	---	---	50	195	77	---	---	---
	Ponderosa pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain Douglas-fir-----	110	4.0	---	50	160	72	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
165: Longpen-----	Grand fir-----	107	---	---	50	167	85	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Ponderosa pine-----	123	---	---	100	149	40	---	---	---
	Rocky Mountain Douglas-fir-----	93	7.9	---	50	112	87	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
166: Longpen-----	Grand fir-----	107	---	---	50	---	167	85		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	123	---	---	100	---	149	40		
	Rocky Mountain Douglas-fir-----	93	7.9	50	50	---	112	87		
	Western larch-----	---	---	---	50	---	---	---		
167: Meland-----	---	---	---	---	---	---	---	---		
Jacket-----	Ponderosa pine-----	114	---	---	100	---	128	40		
168: Meland-----	---	---	---	---	---	---	---	---		
Keuterville-----	Ponderosa pine-----	95	---	---	100	---	94	40		
169: Mushel-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	102	9.7	50	50	---	157	88		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	97	12.8	50	50	---	122	82		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	---	50	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	94	---	---	50	---	---	---		
Brodeer-----	Engelmann spruce-----	108	---	---	100	---	123	85		
	Grand fir-----	106	10.4	50	50	---	165	85		
	Rocky Mountain Douglas-fir-----	96	8.6	50	50	---	120	83		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	84	7.5	50	50	---	130	70		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	84	---	---	50	---	162	100		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index base	Site index age	Volume of wood fiber (CMAI)	CMAI age			
		age	age	age	age			Yrs	Cu ft/ac/yr	Yrs
170:										
Mushel-----	Engelmann spruce-----	---	---	---	100	---	---	100	---	---
	Grand fir-----	102	9.7	---	50	157	88	50	157	---
	Lodgepole pine-----	---	---	---	100	---	---	100	---	---
	Rocky Mountain									
	Douglas-fir-----	97	12.8	---	50	122	82	50	122	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western larch-----	---	---	---	50	---	---	50	---	---
	Western redcedar-----	---	---	---	100	---	---	100	---	---
	Western white pine--	94	---	---	50	---	---	50	---	---
Dullaxe-----	Engelmann spruce-----	---	---	---	100	---	---	100	---	---
	Grand fir-----	110	5.1	---	50	173	83	50	173	---
	Rocky Mountain									
	Douglas-fir-----	99	---	---	50	127	80	50	127	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western larch-----	---	---	---	50	---	---	50	---	---
	Western redcedar-----	---	---	---	100	---	---	100	---	---
	Western white pine--	---	---	---	50	---	---	50	---	---
171:										
Nakarna, high										
precipitation-----	Engelmann spruce-----	---	---	---	100	---	---	100	---	---
	Grand fir-----	87	---	---	50	129	---	50	129	---
	Rocky Mountain									
	Douglas-fir-----	76	---	---	50	72	---	50	72	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western larch-----	70	---	---	50	100	---	50	100	---
	Western redcedar-----	---	---	---	100	---	---	100	---	---
	Western white pine--	---	---	---	50	---	---	50	---	---
172:										
Nakarna, high										
precipitation-----	Engelmann spruce-----	---	---	---	100	---	---	100	---	---
	Grand fir-----	87	---	---	50	129	---	50	129	---
	Rocky Mountain									
	Douglas-fir-----	76	---	---	50	72	---	50	72	---
	Subalpine fir-----	---	---	---	100	---	---	100	---	---
	Western larch-----	70	---	---	50	100	---	50	100	---
	Western redcedar-----	---	---	---	100	---	---	100	---	---
	Western white pine--	---	---	---	50	---	---	50	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index	Site index	Site index	Site index	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age
173: Nakarna-----	Grand fir-----	91	---	---	---	---	50	143	---	---
	Lodgepole pine-----	---	---	---	---	---	100	---	---	---
	Rocky Mountain Douglas-fir-----	---	---	---	---	---	50	---	---	---
	Subalpine fir-----	---	---	---	---	---	100	---	---	---
	Western hemlock-----	---	---	---	---	---	100	---	---	---
	Western larch-----	---	---	---	---	---	50	---	---	---
	Western redcedar-----	---	---	---	---	---	100	---	---	---
	Western white pine--	71	---	---	---	---	50	143	---	---
Nakarna, warm-----	Engelmann spruce-----	---	---	---	---	---	100	---	---	---
	Grand fir-----	79	---	---	---	---	50	112	---	108
	Lodgepole pine-----	---	---	---	---	---	100	---	---	---
	Rocky Mountain Douglas-fir-----	90	---	---	---	---	50	104	---	90
	Subalpine fir-----	---	---	---	---	---	100	---	---	---
	Western larch-----	70	---	---	---	---	50	100	---	---
	Western redcedar-----	---	---	---	---	---	100	---	---	---
	Western white pine--	---	---	---	---	---	50	---	---	---
174: Narnett-----	Engelmann spruce-----	87	---	---	---	---	100	86	---	95
	Grand fir-----	73	---	---	---	---	50	100	---	111
	Lodgepole pine-----	---	---	---	---	---	100	---	---	---
	Rocky Mountain Douglas-fir-----	78	---	---	---	---	50	77	---	98
	Subalpine fir-----	---	---	---	---	---	100	---	---	---
	Western hemlock-----	---	---	---	---	---	100	---	---	---
	Western larch-----	---	---	---	---	---	50	---	---	---
Jury-----	Engelmann spruce-----	101	---	---	---	---	100	111	---	85
	Grand fir-----	101	11.5	---	---	---	50	155	---	88
	Rocky Mountain Douglas-fir-----	90	7.2	---	---	---	50	104	---	90
	Subalpine fir-----	---	---	---	---	---	100	---	---	---
	Western larch-----	86	---	---	---	---	50	134	---	79
	Western redcedar-----	---	---	---	---	---	100	---	---	---
	Western white pine--	71	---	---	---	---	50	147	---	100

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	CMAI age			
								Yrs	Cu ft/ac/yr	Yrs
175: Neva-----	Grand fir-----	100	13.2	---	50	153	89	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	100	---	---
	Ponderosa pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	94	13.1	---	50	114	86	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
176: Newlig-----	Ponderosa pine-----	117	---	---	100	136	40	---	---	---
177: Noil-----	Grand fir-----	104	---	---	50	161	87	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Ponderosa pine-----	101	---	---	100	104	40	---	---	---
	Rocky Mountain									
	Douglas-fir-----	82	19.0	---	50	86	96	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---
Keeler-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	---
	Grand fir-----	107	14.0	---	50	167	85	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	99	7.0	---	50	127	80	---	---	---
	Subalpine fir-----	---	---	---	100	---	---	---	---	---
	Western larch-----	81	---	---	50	124	70	---	---	---
	Western redcedar-----	128	---	---	100	---	---	---	---	---
	Western white pine--	---	---	---	50	---	---	---	---	---
178: Noil-----	Grand fir-----	104	---	---	50	161	87	---	---	---
	Lodgepole pine-----	---	---	---	100	---	---	---	---	---
	Ponderosa pine-----	101	---	---	100	104	40	---	---	---
	Rocky Mountain									
	Douglas-fir-----	82	19.0	---	50	86	96	---	---	---
	Western larch-----	---	---	---	50	---	---	---	---	---



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Volume of wood fiber (CMAI)
		aver- age	age	ard devia- tion*						
		Ft	Yrs							
178:										
Boulder creek, warm	Engelmann spruce	---								
	Grand fir	---	---		100					---
	Lodgepole pine	---	---		50					---
	Ponderosa pine	---	---		100					---
	Rocky Mountain Douglas-fir	---	---		100					---
	Western larch	---	---		50					---
	Western white pine	---	---		50					---
Rock outcrop	---	---	---							---
179:										
Norwidge, moist	Engelmann spruce	---								---
	Grand fir	103	5.3		100					159
	Rocky Mountain Douglas-fir	102	---		50					136
	Subalpine fir	---	---		100					---
	Western larch	---	---		50					---
	Western redcedar	---	---		100					---
	Western white pine	---	---		50					---
Threebear, moist	Engelmann spruce	---	---		100					---
	Grand fir	105	---		50					163
	Rocky Mountain Douglas-fir	---	---		50					---
	Subalpine fir	---	---		100					---
	Western larch	---	---		50					---
	Western redcedar	---	---		100					---
	Western white pine	---	---		50					---
180:										
Odonnell	Grand fir	107	---		50					167
	Rocky Mountain Douglas-fir	---	---		50					---
	Western hemlock	---	---		100					---
	Western larch	---	---		50					---
	Western redcedar	---	---		100					---
	Western white pine	---	---		50					---

Table 12.-Forest Productivity—Continued

Map symbol and soil name		Potential productivity								
		Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
180: Grandad-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	
	Grand fir-----	102	9.6	50	50	---	157	88	---	
	Rocky Mountain Douglas-fir-----	99	---	---	50	---	127	80	---	
	Subalpine fir-----	---	---	---	100	---	---	---	---	
	Western larch-----	71	---	---	50	---	103	70	---	
	Western redcedar-----	78	---	---	100	---	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	---	
181: Odonnell-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	
	Grand fir-----	107	---	---	50	---	167	85	---	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	---	
	Western hemlock-----	---	---	---	100	---	---	---	---	
	Western redcedar-----	---	---	---	100	---	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	---	
	---	---	---	---	---	---	---	---	---	
182: Oxyaquic Xerofluvents, occasionally flooded---	---	---	---	---	---	---	---	---	---	
	---	---	---	---	---	---	---	---	---	
Itzee-----	Ponderosa pine-----	104	---	---	100	---	110	40	---	
	---	---	---	---	---	---	---	---	---	
183: Pits, quarry-----	---	---	---	---	---	---	---	---	---	
	---	---	---	---	---	---	---	---	---	
184: Placer-----	Engelmann spruce-----	---	---	---	100	---	---	---	---	
	Grand fir-----	91	17.8	50	50	---	135	95	---	
	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Rocky Mountain Douglas-fir-----	84	---	---	50	---	90	94	---	
	Subalpine fir-----	---	---	---	100	---	---	---	---	
	Western larch-----	---	---	---	50	---	---	---	---	
	Western redcedar-----	---	---	---	100	---	---	---	---	
Western white pine--	---	---	---	50	---	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name		Potential productivity									
		Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
184: Dowper-----	Engelmann spruce----	---						---	---		
	Grand fir-----	124			---	100		210	76		
	Rocky Mountain Douglas-fir-----	---			---	50		---	---		
	Subalpine fir-----	---			---	100		---	---		
	Western larch-----	98			---	50		160	70		
	Western redcedar----	---			---	100		---	---		
	Western white pine--	86			---	50		165	100		
	Grangemont-----	Engelmann spruce----	---			---	100		---	---	
185: Poorman, dry-----	Grand fir-----	90			---	50		133	96		
	Lodgepole pine-----	---			---	100		---	---		
	Rocky Mountain Douglas-fir-----	85			---	50		92	94		
	Subalpine fir-----	---			---	100		---	---		
	Western larch-----	---			---	50		---	---		
	Western redcedar----	---			---	100		---	---		
	Western white pine--	---			---	50		---	---		
	Engelmann spruce----	---			---	100		---	---		
186: Poorman, dry-----	Grand fir-----	112			6.0	50		177	82		
	Lodgepole pine-----	132			---	100		---	---		
	Ponderosa pine-----	---			---	100		---	---		
	Rocky Mountain Douglas-fir-----	98			---	50		125	81		
	Western larch-----	---			---	50		---	---		
	Western white pine--	---			---	50		---	---		
	Engelmann spruce----	---			---	100		---	---		
	Grand fir-----	112			6.0	50		177	82		
	Lodgepole pine-----	132			---	100		---	---		
	Ponderosa pine-----	---			---	100		---	---		
	Rocky Mountain Douglas-fir-----	98			---	50		125	81		
	Western larch-----	---			---	50		---	---		
	Western white pine--	---			---	50		---	---		
	Engelmann spruce----	---			---	100		---	---		
	Grand fir-----	112			6.0	50		177	82		
	Lodgepole pine-----	132			---	100		---	---		
	Ponderosa pine-----	---			---	100		---	---		
	Rocky Mountain Douglas-fir-----	98			---	50		125	81		
	Western larch-----	---			---	50		---	---		
	Western white pine--	---			---	50		---	---		
	Engelmann spruce----	---			---	100		---	---		
	Grand fir-----	112			6.0	50		177	82		
	Lodgepole pine-----	132			---	100		---	---		
	Ponderosa pine-----	---			---	100		---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index base	Site index age	Volume of wood fiber (CMAI)	CMAI age			
		age	age	age	age			Yrs	Cu ft/ac/yr	Yrs
186:										
Poorman-----	Engelmann spruce-----	---	---	---	100	---	---			
	Grand fir-----	84	11.1	50	122	122	103			
	Lodgepole pine-----	108	---	100	97	97	90			
	Rocky Mountain									
	Douglas-fir-----	87	14.3	50	97	97	92			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	56	---	50	74	74	70			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
187:										
Poorman-----	Engelmann spruce-----	---	---	100	---	---	---			
	Grand fir-----	84	11.1	50	122	122	103			
	Lodgepole pine-----	108	---	100	97	97	90			
	Rocky Mountain									
	Douglas-fir-----	87	14.3	50	97	97	92			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	56	---	50	74	74	70			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
Grandad-----	Engelmann spruce-----	---	---	100	---	---	---			
	Grand fir-----	102	9.6	50	157	157	88			
	Rocky Mountain									
	Douglas-fir-----	99	---	50	127	127	80			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	71	---	50	103	103	70			
	Western redcedar-----	78	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
188:										
Poorman-----	Engelmann spruce-----	---	---	100	---	---	---			
	Grand fir-----	84	11.1	50	122	122	103			
	Lodgepole pine-----	108	---	100	97	97	90			
	Rocky Mountain									
	Douglas-fir-----	87	14.3	50	97	97	92			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	56	---	50	74	74	70			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
188: Grandad-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	102	9.6	---	50	157	88	---		
	Rocky Mountain Douglas-fir-----	99	---	---	50	127	80	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	71	---	---	50	103	70	---		
	Western redcedar-----	78	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
189: Poorman-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	84	11.1	---	50	122	103	---		
	Lodgepole pine-----	108	---	---	100	97	90	---		
	Rocky Mountain Douglas-fir-----	87	14.3	---	50	97	92	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	56	---	---	50	74	70	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
Grandad, dry-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	96	9.9	---	50	145	92	---		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	88	11.6	---	50	99	91	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	79	---	---	50	120	70	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		
190: Poorman-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	84	11.1	---	50	122	103	---		
	Lodgepole pine-----	108	---	---	100	97	90	---		
	Rocky Mountain Douglas-fir-----	87	14.3	---	50	97	92	---		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	56	---	---	50	74	70	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	---	50	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
190: Grandad, dry-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	96	9.9	50	100	---	145	92		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	88	11.6	50	100	---	99	91		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	79	---	50	100	---	120	70		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine-----	---	---	---	50	---	---	---		
191: Reggear-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	78	9.7	50	100	---	110	108		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	77	---	50	50	---	75	99		
	Western larch-----	82	---	50	50	---	126	70		
	Western white pine-----	---	---	---	50	---	---	---		
Kauder-----	Engelmann spruce-----	78	---	---	100	---	73	100		
	Grand fir-----	100	13.5	50	100	---	153	89		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	93	10.2	50	50	---	112	87		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	71	---	50	100	---	103	70		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine-----	79	---	---	50	---	152	100		
192: Reggear-----	Engelmann spruce-----	---	---	---	100	---	---	---		
	Grand fir-----	78	9.7	50	100	---	110	108		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain									
	Douglas-fir-----	77	---	50	50	---	75	99		
	Western larch-----	82	---	50	50	---	126	70		
	Western white pine-----	---	---	---	50	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name		Potential productivity									
		Common trees		Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
192: Sedgwick											
		Engelmann spruce									
		Grand fir	76			100					
		Lodgepole pine				50		106	109		
		Ponderosa pine	109			100					
		Rocky Mountain Douglas-fir				100		120	40		
193: Rettig, high elevation											
		Douglas-fir	72	2.1		50		65	102		
		Western larch				50					
		Engelmann spruce				100					
		Grand fir	103			50		159	87		
194: Rettig											
		Ponderosa pine				100					
		Rocky Mountain Douglas-fir	86			50		95	93		
		Western larch				50					
		Western white pine				50					
195: Rettig, cold											
		Engelmann spruce	117			100		140	80		
		Grand fir	104	3.5		50		161	87		
		Rocky Mountain Douglas-fir	98			50		125	81		
		Subalpine fir				100					
		Western hemlock	118			100		176	50		
196: Rettig, high elevation											
		Western larch				50					
		Western redcedar				100					
		Western white pine	58			50		115	100		
197: Rettig, cold											
		Engelmann spruce				100					
		Grand fir	103			50		159	87		
		Ponderosa pine				100					
		Rocky Mountain Douglas-fir	86			50		95	93		
		Western larch				50					
198: Rettig, high elevation											
		Western white pine				50					

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Volume of wood fiber (CMAI)	CMAI age			
		Ft		Yrs	Cu ft/ac/yr	Yrs				
196:										
Rettig, cool-----	Engelmann spruce-----	---	---	100	---	---	---			
	Grand fir-----	106	---	50	165	85	---			
	Rocky Mountain									
	Douglas-fir-----	103	---	50	139	77	---			
	Subalpine fir-----	---	---	100	---	---	---			
	Western hemlock-----	125	---	100	190	50	---			
	Western larch-----	---	---	50	---	---	---			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
Rettig, dry-----	Grand fir-----	---	---	50	---	---	---			
	Lodgepole pine-----	---	---	100	---	---	---			
	Rocky Mountain									
	Douglas-fir-----	---	---	50	---	---	---			
	Subalpine fir-----	---	---	100	---	---	---			
	Western hemlock-----	---	---	100	---	---	---			
	Western larch-----	---	---	50	---	---	---			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			
197:										
Rettig-----	Engelmann spruce-----	117	---	100	140	80	---			
	Grand fir-----	104	3.5	50	161	87	---			
	Rocky Mountain									
	Douglas-fir-----	98	---	50	125	81	---			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	---	---	50	---	---	---			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	58	---	50	115	100	---			
Grandad-----	Engelmann spruce-----	---	---	100	---	---	---			
	Grand fir-----	102	9.6	50	157	88	---			
	Rocky Mountain									
	Douglas-fir-----	99	---	50	127	80	---			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	71	---	50	103	70	---			
	Western redcedar-----	78	---	100	---	---	---			
	Western white pine--	---	---	50	---	---	---			



Table 12.—Forest Productivity—Continued

Map symbol and soil name		Potential productivity						
	Common trees	Site index average	Site index stand-age deviation*	Site index base age	Volume of wood fiber (CMAI)	CMAI age		
		Ft		Yrs	Cu ft/ac/yr	Yrs		
198: Rettig, warm, dry	Engelmann spruce	---	---	100	---	---		
	Grand fir	84	25.1	50	122	103		
	Lodgepole pine	---	---	100	---	---		
	Rocky Mountain Douglas-fir	66	---	50	54	106		
	Subalpine fir	---	---	100	---	---		
	Western larch	---	---	50	---	---		
	Western redcedar	---	---	100	---	---		
	Western white pine	---	---	50	---	---		
Township	Engelmann spruce	---	---	100	---	---		
	Grand fir	76	---	50	106	109		
	Lodgepole pine	---	---	100	---	---		
	Rocky Mountain Douglas-fir	74	---	50	69	101		
	Subalpine fir	---	---	100	---	---		
	Western larch	---	---	50	---	---		
	Western redcedar	---	---	100	---	---		
	Western white pine	---	---	50	---	---		
199: Rettig	Engelmann spruce	117	---	100	140	80		
	Grand fir	104	3.5	50	161	87		
	Rocky Mountain Douglas-fir	98	---	50	125	81		
	Subalpine fir	---	---	100	---	---		
	Western larch	---	---	50	---	---		
	Western redcedar	---	---	100	---	---		
	Western white pine	58	---	50	115	100		
	Engelmann spruce	---	---	100	---	---		
Township, wet	Grand fir	102	19.3	50	157	88		
	Rocky Mountain Douglas-fir	90	8.6	50	104	90		
	Subalpine fir	---	---	100	---	---		
	Western larch	---	---	50	---	---		
	Western redcedar	---	---	100	---	---		
	Western white pine	---	---	50	---	---		
	Engelmann spruce	---	---	100	---	---		
	Grand fir	---	---	100	---	---		
Stepoff	---	---	---	---	---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver-	Site index stand-	Site index ard devia-	Site index base age	Volume of wood fiber (CMAI)	Yrs	Cu ft/ac/yr	Yrs	CMAI age
200:		Ft								
Riswold-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	104	7.9	---	50	161	50	161	50	87
	Lodgepole pine-----	---	---	---	100	---	100	---	---	---
	Rocky Mountain									
	Douglas-fir-----	97	10.0	---	50	122	50	122	50	82
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	---	---	---	50	---	50	---	---	---
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---
Cranberry-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	95	17.0	---	50	143	50	143	50	92
	Lodgepole pine-----	---	---	---	100	---	100	---	---	---
	Rocky Mountain									
	Douglas-fir-----	100	6.6	---	50	130	50	130	50	79
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	---	---	---	50	---	50	---	---	---
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---
201:										
Riswold-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	104	7.9	---	50	161	50	161	50	87
	Lodgepole pine-----	---	---	---	100	---	100	---	---	---
	Rocky Mountain									
	Douglas-fir-----	97	10.0	---	50	122	50	122	50	82
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	---	---	---	50	---	50	---	---	---
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---
Grangemont-----	Engelmann spruce-----	---	---	---	100	---	100	---	---	---
	Grand fir-----	90	---	---	50	133	50	133	50	96
	Lodgepole pine-----	---	---	---	100	---	100	---	---	---
	Rocky Mountain									
	Douglas-fir-----	85	---	---	50	92	50	92	50	94
	Subalpine fir-----	---	---	---	100	---	100	---	---	---
	Western larch-----	---	---	---	50	---	50	---	---	---
	Western redcedar-----	---	---	---	100	---	100	---	---	---
	Western white pine--	---	---	---	50	---	50	---	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
202:										
Rock outcrop-----	---	---	---				---	---		
Whiskeycreek-----	---	---	---				---	---		
Texascreek, dry-----	Ponderosa pine-----	99	---		100		101	40		
203:										
Scaler-----	Engelmann spruce-----	---	---		100		---	---		
	Grand fir-----	81	10.8		50		116	106		
	Lodgepole pine-----	---	---		100		---	---		
	Rocky Mountain Douglas-fir-----	77	9.8		50		75	99		
	Subalpine fir-----	---	---		100		---	---		
	Western larch-----	64	---		50		89	70		
	Western redcedar-----	---	---		100		---	---		
	Western white pine--	---	---		50		---	---		
204:										
Scaler-----	Engelmann spruce-----	---	---		100		---	---		
	Grand fir-----	81	10.8		50		116	106		
	Lodgepole pine-----	---	---		100		---	---		
	Rocky Mountain Douglas-fir-----	77	9.8		50		75	99		
	Subalpine fir-----	---	---		100		---	---		
	Western larch-----	64	---		50		89	70		
	Western redcedar-----	---	---		100		---	---		
	Western white pine--	---	---		50		---	---		
Grandad-----	Engelmann spruce-----	---	---		100		---	---		
	Grand fir-----	102	9.0		50		157	88		
	Rocky Mountain Douglas-fir-----	99	---		50		127	80		
	Subalpine fir-----	---	---		100		---	---		
	Western larch-----	71	---		50		103	70		
	Western redcedar-----	78	---		100		---	---		
	Western white pine--	---	---		50		---	---		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees		Site index		Site index		Site index		Volume of wood fiber (CMAI)	
	aver-	age	age	devia-	tion*	base	age			
	Ft	Yrs	Cu ft/ac/yr	Yrs						
205:										
Scaler-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	81	10.8	---	---	50	---	116	---	106
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	77	9.8	---	---	50	---	75	---	99
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	64	---	---	---	50	---	89	---	70
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
Grangemont-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	90	---	---	---	50	---	133	---	96
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	85	---	---	---	50	---	92	---	94
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	---	---	---	---	50	---	---	---	---
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
206:										
Scand-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	84	12.1	---	---	50	---	122	---	103
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	79	9.4	---	---	50	---	79	---	98
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	---	---	---	---	50	---	---	---	---
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---
Scaler-----	Engelmann spruce-----	---	---	---	---	100	---	---	---	---
	Grand fir-----	81	10.8	---	---	50	---	116	---	106
	Lodgepole pine-----	---	---	---	---	100	---	---	---	---
	Rocky Mountain									
	Douglas-fir-----	77	9.8	---	---	50	---	75	---	99
	Subalpine fir-----	---	---	---	---	100	---	---	---	---
	Western larch-----	64	---	---	---	50	---	89	---	70
	Western redcedar-----	---	---	---	---	100	---	---	---	---
	Western white pine--	---	---	---	---	50	---	---	---	---

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Volume of wood fiber (CMAI)	CMAI age			
		Ft		Yrs	Cu ft/ac/yr	Yrs				
207: Sedgwick	Engelmann spruce	---	---	100	---	---	---			
	Grand fir	76	---	50	106	109	---			
	Lodgepole pine	---	---	100	---	---	---			
	Ponderosa pine	109	---	100	120	40	---			
	Rocky Mountain Douglas-fir	72	2.1	50	65	102	---			
	Western larch	---	---	50	---	---	---			
208: Sedgwick	Engelmann spruce	---	---	100	---	---	---			
	Grand fir	76	---	50	106	109	---			
	Lodgepole pine	---	---	100	---	---	---			
	Ponderosa pine	109	---	100	120	40	---			
	Rocky Mountain Douglas-fir	72	2.1	50	65	102	---			
	Western larch	---	---	50	---	---	---			
209: Sedgwick	Engelmann spruce	---	---	100	---	---	---			
	Grand fir	76	---	50	106	109	---			
	Lodgepole pine	---	---	100	---	---	---			
	Ponderosa pine	109	---	100	120	40	---			
	Rocky Mountain Douglas-fir	72	2.1	50	65	102	---			
	Western larch	---	---	50	---	---	---			
210: Setters	Lodgepole pine	---	---	100	---	---	---			
	Ponderosa pine	101	5.5	100	104	40	---			
	Rocky Mountain Douglas-fir	76	6.1	50	73	99	---			

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Site index	Volume of wood fiber (CMAI)
		aver- age	age	ard devia- tion*						
		Ft	Yrs							
211: Shattuck-----	Engelmann spruce-----	---								
	Grand fir-----	91	---	---	---	100				---
	Lodgepole pine-----	---	---	---	---	50				135
	Rocky Mountain					100				---
	Douglas-fir-----	87	---	---	---	50				86
	Subalpine fir-----	---	---	---	---	100				---
	Western larch-----	---	---	---	---	50				---
	Western redcedar-----	---	---	---	---	100				---
	Western white pine--	---	---	---	---	50				---
212: Shattuck-----	Engelmann spruce-----	---								
	Grand fir-----	91	---	---	---	100				---
	Lodgepole pine-----	---	---	---	---	50				135
	Rocky Mountain					100				---
	Douglas-fir-----	87	---	---	---	50				86
	Subalpine fir-----	---	---	---	---	100				---
	Western larch-----	---	---	---	---	50				---
	Western redcedar-----	---	---	---	---	100				---
	Western white pine--	---	---	---	---	50				---
213: Shattuck, moist-----	Engelmann spruce-----	---								
	Grand fir-----	103	---	---	---	100				---
	Rocky Mountain					50				159
	Douglas-fir-----	112	---	---	---	50				165
	Subalpine fir-----	---	---	---	---	100				---
	Western larch-----	---	---	---	---	50				---
	Western redcedar-----	---	---	---	---	100				---
	Western white pine--	---	---	---	---	50				---
214: Shattuck, moist-----	Engelmann spruce-----	---								
	Grand fir-----	103	---	---	---	100				---
	Rocky Mountain					50				159
	Douglas-fir-----	112	---	---	---	50				165
	Subalpine fir-----	---	---	---	---	100				---
	Western larch-----	---	---	---	---	50				---
	Western redcedar-----	---	---	---	---	100				---
	Western white pine--	---	---	---	---	50				---

Table 12.-Forest Productivity—Continued

Map symbol and soil name		Potential productivity									
		Common trees		Site index	Site index	Site index	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
				aver-age	stand-ard	devia-tion*					
214:											
Dworshak, moist-----	Engelmann spruce----	---			---		100		---	---	
	Grand fir-----	---			---		50		---	---	
	Rocky Mountain Douglas-fir-----	---			---		50		---	---	
	Subalpine fir-----	---			---		100		---	---	
	Western larch-----	---			---		50		---	---	
	Western redcedar----	---			---		100		---	---	
	Western white pine--	---			---		50		---	---	
215:											
Shattuck-----	Engelmann spruce----	---			---		100		---	---	
	Grand fir-----	91			---		50		135	95	
	Lodgepole pine-----	---			---		100		---	---	
	Rocky Mountain Douglas-fir-----	87			---		50		86	96	
	Subalpine fir-----	---			---		100		---	---	
	Western larch-----	---			---		50		---	---	
	Western redcedar----	---			---		100		---	---	
	Western white pine--	---			---		50		---	---	
Dworshak-----	Engelmann spruce----	---			---		100		---	---	
	Grand fir-----	83			2.5		50		120	104	
	Lodgepole pine-----	---			---		100		---	---	
	Rocky Mountain Douglas-fir-----	93			---		50		112	87	
	Subalpine fir-----	---			---		100		---	---	
	Western larch-----	72			---		50		105	70	
	Western redcedar----	---			---		100		---	---	
	Western white pine--	---			---		50		---	---	
216:											
Sly-----	Engelmann spruce----	---			---		100		---	---	
	Grand fir-----	107			---		50		167	85	
	Lodgepole pine-----	---			---		100		---	---	
	Ponderosa pine-----	132			---		100		170	40	
	Rocky Mountain Douglas-fir-----	93			---		50		112	87	
	Western larch-----	---			---		50		---	---	
	Western white pine--	97			---		50		---	---	
Wilkins-----	---	---			---				---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age
217: Southwick-----	Ponderosa pine-----	101			10.1	100			87	40
218: Southwick-----	Ponderosa pine-----	101			10.1	100			87	40
Larkin-----	Ponderosa pine-----	122			---	100			146	40
219: Statemeadow-----	Engelmann spruce-----	---			---	100			---	---
	Grand fir-----	97			---	50			147	91
	Lodgepole pine-----	110			---	100			99	90
	Ponderosa pine-----	---			---	100			---	---
	Rocky Mountain Douglas-fir-----	73			---	50			76	101
	Western larch-----	---			---	50			---	---
	Western white pine--	---			---	50			---	---
Reggear-----	Engelmann spruce-----	---			---	100			---	---
	Grand fir-----	78			9.7	50			110	108
	Lodgepole pine-----	---			---	100			---	---
	Ponderosa pine-----	---			---	100			---	---
	Rocky Mountain Douglas-fir-----	77			---	50			75	99
	Western larch-----	82			---	50			126	70
	Western white pine--	---			---	50			---	---
220: Swayne-----	Ponderosa pine-----	105			10.1	100			112	40
	Rocky Mountain Douglas-fir-----	80			---	50			81	97
221: Taney-----	Lodgepole pine-----	---			---	100			---	---
	Ponderosa pine-----	107			---	100			116	40
	Rocky Mountain Douglas-fir-----	77			---	50			75	99



Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index average	Site index stand age	Site index stand age deviation*	Yrs	Cu ft/ac/yr	Yrs	Volume of wood fiber (CMAI)	CMAI age	
222: Taney-----	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	107	---	---	100	116	40	116	40	
	Rocky Mountain Douglas-fir-----	77	---	---	50	75	99	75	99	
Joel-----	Ponderosa pine-----	106	---	---	100	114	40	114	40	
	Rocky Mountain Douglas-fir-----	76	---	---	50	73	99	73	99	
223: Taney-----	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	107	---	---	100	116	40	116	40	
	Rocky Mountain Douglas-fir-----	77	---	---	50	75	99	75	99	
McCrosket-----	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	111	5.1	5.1	100	124	40	124	40	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	---	
224: Taney-----	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	107	---	---	100	116	40	116	40	
	Rocky Mountain Douglas-fir-----	77	---	---	50	75	99	75	99	
Setters-----	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	101	5.5	5.5	100	104	40	104	40	
	Rocky Mountain Douglas-fir-----	76	6.1	6.1	50	73	99	73	99	
225: Taney-----	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	107	---	---	100	116	40	116	40	
	Rocky Mountain Douglas-fir-----	77	---	---	50	75	99	75	99	
Setters-----	Lodgepole pine-----	---	---	---	100	---	---	---	---	
	Ponderosa pine-----	101	5.5	5.5	100	104	40	104	40	
	Rocky Mountain Douglas-fir-----	76	6.1	6.1	50	73	99	73	99	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Volume of wood fiber (CMAI)	CMAI age			
		Ft		Yrs	Cu ft/ac/yr	Yrs				
226: Teakean-----	Grand fir-----	---	---	50	---	---	---			
	Lodgepole pine-----	---	---	100	---	---	---			
	Ponderosa pine-----	111	---	100	124	40	---			
	Rocky Mountain									
	Douglas-fir-----	74	---	50	69	101	---			
	Western larch-----	---	---	50	---	---	---			
227: Teneb-----	---	---	---		---	---	---			
228: Texascreek-----	Lodgepole pine-----	---	---	100	---	---	---			
	Ponderosa pine-----	---	---	100	---	---	---			
	Rocky Mountain									
	Douglas-fir-----	---	---	50	---	---	---			
Rock outcrop-----	---	---	---		---	---	---			
229: Texascreek, dry-----	Ponderosa pine-----	99	---	100	101	40	---			
Whiskeycreek-----	---	---	---		---	---	---			
230: Norwidge-----	Engelmann spruce-----	---	---	100	---	---	---			
	Grand fir-----	103	9.2	50	159	87	---			
	Lodgepole pine-----	---	---	100	---	---	---			
	Rocky Mountain									
	Douglas-fir-----	99	---	50	127	80	---			
	Subalpine fir-----	---	---	100	---	---	---			
	Western larch-----	88	---	50	138	70	---			
	Western redcedar-----	---	---	100	---	---	---			
	Western white pine--	110	---	50	---	---	---			

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
230: Threebear-----	Engelmann spruce----	---	---	---	100	---	---	---		
	Grand fir-----	97	12.4	50	100	---	147	91		
	Lodgepole pine-----	---	---	---	---	---	---	---		
	Rocky Mountain Douglas-fir-----	100	7.3	50	---	---	130	97		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	93	4.6	50	---	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	89	9.9	50	---	---	---	---		
231: Tomodo-----	Engelmann spruce----	---	---	---	100	---	---	---		
	Grand fir-----	112	---	50	---	---	177	82		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Ponderosa pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	103	---	50	---	---	139	77		
	Western larch-----	---	---	50	---	---	---	---		
	Western white pine--	---	---	50	---	---	---	---		
232: Tomodo-----	Engelmann spruce----	---	---	---	100	---	---	---		
	Grand fir-----	112	---	50	---	---	177	82		
	Lodgepole pine-----	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir-----	103	---	50	---	---	139	77		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	---	---	50	---	---	---	---		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	---	---	50	---	---	---	---		
Lado-----	Engelmann spruce----	---	---	---	100	---	---	---		
	Grand fir-----	103	15.3	50	---	---	159	87		
	Rocky Mountain Douglas-fir-----	91	10.9	50	---	---	107	89		
	Subalpine fir-----	---	---	---	100	---	---	---		
	Western larch-----	86	---	50	---	---	134	70		
	Western redcedar-----	---	---	---	100	---	---	---		
	Western white pine--	55	---	50	---	---	110	100		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
233: Township	Engelmann spruce	---	---	---	100	---	---	---		
	Grand fir	76	---	---	50	---	106	109		
	Lodgepole pine	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir	74	---	---	50	---	69	101		
	Subalpine fir	---	---	---	100	---	---	---		
	Western larch	---	---	---	50	---	---	---		
	Western redcedar	---	---	---	100	---	---	---		
	Western white pine	---	---	---	50	---	---	---		
Rettig	Engelmann spruce	117	---	---	100	---	140	80		
	Grand fir	104	3.5	---	50	---	161	87		
	Rocky Mountain Douglas-fir	98	---	---	50	---	125	81		
	Subalpine fir	---	---	---	100	---	---	---		
	Western larch	---	---	---	50	---	---	---		
	Western redcedar	---	---	---	100	---	---	---		
	Western white pine	58	---	---	50	---	115	100		
234: Township	Engelmann spruce	---	---	---	100	---	---	---		
	Grand fir	76	---	---	50	---	106	109		
	Lodgepole pine	---	---	---	100	---	---	---		
	Rocky Mountain Douglas-fir	74	---	---	50	---	69	101		
	Subalpine fir	---	---	---	100	---	---	---		
	Western larch	---	---	---	50	---	---	---		
	Western redcedar	---	---	---	100	---	---	---		
	Western white pine	---	---	---	50	---	---	---		
Rettig	Engelmann spruce	117	---	---	100	---	140	80		
	Grand fir	104	3.5	---	50	---	161	87		
	Rocky Mountain Douglas-fir	98	---	---	50	---	125	81		
	Subalpine fir	---	---	---	100	---	---	---		
	Western larch	---	---	---	50	---	---	---		
	Western redcedar	---	---	---	100	---	---	---		
	Western white pine	58	---	---	50	---	115	100		

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity								
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age	
235:									
Township, dry-----	Engelmann spruce-----	---	---	---	100	---	---	---	
	Grand fir-----	98	---	---	50	---	149	90	
	Lodgepole pine-----	---	---	---	100	---	---	---	
	Ponderosa pine-----	118	---	---	100	---	137	40	
	Rocky Mountain Douglas-fir-----	85	---	---	50	---	92	94	
	Western larch-----	60	---	---	50	---	81	70	
	Western white pine--	---	---	---	50	---	---	---	
Rettig, low precipitation-----	Engelmann spruce-----	---	---	---	100	---	---	---	
	Grand fir-----	---	---	---	50	---	---	---	
	Lodgepole pine-----	---	---	---	100	---	---	---	
	Ponderosa pine-----	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	
	Western larch-----	---	---	---	50	---	---	---	
	Western white pine--	---	---	---	50	---	---	---	
Nakarna, dry-----	Engelmann spruce-----	---	---	---	100	---	---	---	
	Grand fir-----	79	---	---	50	---	112	108	
	Lodgepole pine-----	---	---	---	100	---	---	---	
	Ponderosa pine-----	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	90	---	---	50	---	104	90	
	Western larch-----	70	---	---	50	---	100	---	
	Western white pine--	---	---	---	50	---	---	---	
236:									
Trappercreek-----	Engelmann spruce-----	113	---	---	100	---	132	80	
	Grand fir-----	72	---	---	50	---	98	112	
	Lodgepole pine-----	---	---	---	100	---	---	---	
	Rocky Mountain Douglas-fir-----	---	---	---	50	---	---	---	
	Subalpine fir-----	108	8.7	---	100	---	123	85	
	Western hemlock-----	---	---	---	100	---	---	---	
	Western larch-----	---	---	---	50	---	---	---	

Table 12.-Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Site index	Volume of wood fiber (CMAI)	CMAI age			
		Ft		Yrs	Cu ft/ac/yr	Yrs				
236: Narnett-----	Engelmann spruce-----	87	---	100	86	95				
	Grand fir-----	73	---	50	100	111				
	Lodgepole pine-----	---	---	100	---	---				
	Rocky Mountain									
	Douglas-fir-----	78	---	50	77	98				
	Subalpine fir-----	---	---	100	---	---				
	Western hemlock-----	---	---	100	---	---				
	Western larch-----	---	---	50	---	---				
237: UVI-----	Grand fir-----	55	---	50	86	---				
	Lodgepole pine-----	---	---	100	---	---				
	Ponderosa pine-----	107	---	100	116	40				
	Rocky Mountain									
	Douglas-fir-----	82	7.1	50	86	96				
	Western larch-----	---	---	50	---	---				
238: UVI-----	Grand fir-----	55	---	50	86	---				
	Lodgepole pine-----	---	---	100	---	---				
	Ponderosa pine-----	107	---	100	116	40				
	Rocky Mountain									
	Douglas-fir-----	82	7.1	50	86	96				
	Western larch-----	---	---	50	---	---				
239: Vaywood, high precipitation-----	Engelmann spruce-----	---	---	100	---	---				
	Lodgepole pine-----	---	---	100	---	---				
	Rocky Mountain									
	Douglas-fir-----	---	---	50	---	---				
	Subalpine fir-----	---	---	100	---	---				
	Western larch-----	---	---	50	---	---				
	Western white pine--	---	---	50	---	---				
Vaywood, dry-----	Engelmann spruce-----	---	---	100	---	---				
	Lodgepole pine-----	73	---	100	62	90				
	Subalpine fir-----	---	---	100	---	---				
	Western larch-----	---	---	50	---	---				

Table 12.—Forest Productivity—Continued

Map symbol and soil name	Potential productivity									
	Common trees	Site index aver- age	Site index stand- ard devia- tion*	Site index base age	Yrs	Cu ft/ac/yr	Volume of wood fiber (CMAI)	CMAI age		
240: Vaywood-----	Engelmann spruce----	96	11.6	100	100	100	---	---		
	Grand fir-----	---	---	50	50	---	---	---		
	Lodgepole pine-----	---	---	100	100	---	---	---		
	Rocky Mountain	88	15.3	50	50	99	---	---		
	Douglas-fir-----	94	12.6	100	100	97	---	---		
	Subalpine fir-----	---	---	100	100	---	---	---		
	Western hemlock-----	61	---	50	50	83	---	---		
	Western larch-----	---	---	---	---	---	---	---		
241: Vaywood-----	Engelmann spruce----	96	11.6	100	100	100	---	---		
	Grand fir-----	---	---	50	50	---	---	---		
	Lodgepole pine-----	---	---	100	100	---	---	---		
	Rocky Mountain	88	15.3	50	50	99	---	---		
	Douglas-fir-----	94	12.6	100	100	97	---	---		
	Subalpine fir-----	---	---	100	100	---	---	---		
	Western hemlock-----	61	---	50	50	83	---	---		
	Western larch-----	---	---	---	---	---	---	---		
Handoff-----	---	---	---	---	---	---	---	---		
242: Water-----	---	---	---	---	---	---	---	---		
243: Wellsbench-----	---	---	---	---	---	---	---	---		
244: Wellsbench-----	---	---	---	---	---	---	---	---		
Lacy-----	Ponderosa pine-----	82	---	100	100	72	---	40		
245: Wilkins-----	---	---	---	---	---	---	---	---		

\* The site index standard deviation provides a measure of the statistical dispersal index data. The standard deviation is only given if there were three or more plots used in the average site index.

# Soil Survey of Clearwater Area, Idaho

**Table 13.**—Haul Roads, Log Landings, and Soil Rutting on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Severe Slope Landslides	1.00 1.00	Poorly suited Slope Landslides Low strength	1.00 1.00 1.00 0.50	Severe Low strength	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Severe Landslides Slope Restrictive layer	1.00 1.00 0.50 0.50	Poorly suited Landslides Slope Low strength	1.00 1.00 1.00 0.50	Severe Low strength	1.00
3: Agatha-----	75	Severe Slope Landslides	1.00 1.00	Poorly suited Slope Landslides Low strength	1.00 1.00 1.00 0.50	Severe Low strength	1.00
4: Ahsahka-----	45	Moderate Slope Landslides Stickiness/slope	0.50 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Fordcreek-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
5: Ahsahka-----	50	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Whiskeycreek-----	30	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
6: Aldermant-----	85	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
7: Aldermant-----	90	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00



# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8: Aldermant, dry-----	75	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
9: Aquandic Cryaquepts	90	Severe Flooding Wetness	1.00 0.50	Poorly suited Flooding Landslides	1.00 0.10	Moderate Low strength	0.50
10: Aquandic Endoaquepts	60	Severe Flooding Wetness Low strength	1.00 0.50 0.50	Poorly suited Flooding Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Aquandic Dystrudepts	20	Severe Wetness Flooding Sandiness	1.00 0.50 0.50	Moderately suited Flooding Landslides	0.50 0.50	Moderate Low strength	0.50
11: Bandmill, dry-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Grangemont-----	30	Moderate Low strength Landslides	0.50 0.24	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Bargamin-----	25	Moderate Slope Landslides	0.50 0.54	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
12: Bandmill-----	40	Moderate Low strength Landslides	0.50 0.21	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
Riswold-----	30	Moderate Low strength Landslides	0.50 0.21	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
13: Berthahill, moist---	75	Moderate Slope Landslides Sandiness	0.50 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Handoff-----	15	Moderate Slope Landslides Sandiness	0.50 0.60 0.50	Poorly suited Low strength Slope Landslides	1.00 1.00 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14: Berthahill-----	70	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Handoff-----	20	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 1.00 0.50	Severe Low strength	1.00
15: Berthahill-----	65	Moderate Slope Landslides Sandiness	0.50 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Shattuck-----	15	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
16: Bigtalk, cool-----	60	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Bigtalk, wet-----	25	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
17: Bigtalk-----	80	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
18: Bigtalk, cool-----	50	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Floodwood, cool-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
19: Bigtalk, cool-----	75	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19: Keeler, cool-----	20	Moderate Slope Landslides	 0.50 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
20: Bouldercreek, moist	85	Moderate Slope Landslides Sandiness	 0.50 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
21: Bouldercreek-----	75	Severe Slope	 1.00	Poorly suited Slope Low strength	 1.00 0.50	Severe Low strength	 1.00
22: Bouldercreek-----	75	Severe Slope	 1.00	Poorly suited Slope Low strength	 1.00 0.50	Severe Low strength	 1.00
23: Bouldercreek, moist	75	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Brodeer-----	15	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
24: Bouldercreek-----	65	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Brodeer-----	25	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
25: Bouldercreek-----	55	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Judgetown-----	25	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
26: Bouldercreek, high precipitation-----	50	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Marblecreek-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Slight Strength	0.10
27: Bouldercreek, cool, dry-----	70	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Rettig, cool-----	25	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
28: Brequito, dry-----	65	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
29: Brequito-----	45	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Grangemont-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
30: Brequito-----	45	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Lado, dry-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
31: Brequito-----	60	Moderate Low strength Landslides	0.50 0.15	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
Lado, dry-----	25	Moderate Low strength Landslides	0.50 0.15	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32: Brequito-----	50	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Mushel-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Low strength Slope Landslides	1.00 1.00 0.50	Severe Low strength	1.00
33: Brequito-----	50	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Mushel-----	35	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 1.00 0.50	Severe Low strength	1.00
34: Brodeer, dry-----	55	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Brodeer-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
35: Brodeer-----	45	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Mushel-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Low strength Slope Landslides	1.00 1.00 0.50	Severe Low strength	1.00
36: Brodeer, warm-----	45	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Mushel, dry-----	30	Moderate Slope Landslides	0.50 0.60	Poorly suited Low strength Slope Landslides	1.00 1.00 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
37:							
Brodeer-----	65	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Bouldercreek-----	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Sandiness	0.50	Landslides	0.50		
38:							
Brodeer-----	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Flewsie, dry-----	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
39:							
Brodeer-----	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Lostpete-----	35	Moderate		Poorly suited		Severe	
		Landslides	0.60	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
40:							
Brodeer, moist-----	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Lostpete, moist-----	30	Moderate		Poorly suited		Severe	
		Landslides	0.60	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
41:							
Brodeer, dry-----	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Mushel-----	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	1.00		
		Low strength	0.50	Landslides	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
42: Brodeer-----	60	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Mushel-----	35	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 1.00 0.50	Severe Low strength	 1.00
43: Burntcreek-----	80	Severe Wetness Flooding Low strength	 1.00 0.50 0.50	Moderately suited Low strength Flooding Landslides	 0.50 0.50 0.10	Severe Low strength	 1.00
44: Campra-----	80	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Landslides	 1.00 0.50	Moderate Low strength	 0.50
45: Campra-----	45	Moderate Slope Landslides	 0.50 0.60	Poorly suited Slope Landslides	 1.00 0.50	Moderate Low strength	 0.50
Sly-----	40	Moderate Slope Landslides	 0.50 0.30	Poorly suited Low strength Slope Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
46: Carlinton-----	80	Moderate Landslides Slope	 0.60 0.50	Poorly suited Slope Wetness Low strength Landslides	 1.00 1.00 0.50 0.50	Severe Low strength	 1.00
47: Carlinton-----	85	Moderate Low strength Landslides	 0.50 0.21	Poorly suited Wetness Low strength Landslides Slope	 1.00 0.50 0.50 0.50	Severe Low strength	 1.00
48: Carlinton-----	50	Moderate Low strength Landslides	 0.50 0.15	Poorly suited Wetness Low strength Landslides Slope	 1.00 0.50 0.50 0.50	Severe Low strength	 1.00
Kruse-----	35	Moderate Slope Landslides	 0.50 0.30	Moderately suited Landslides Slope	 0.50 0.50	Moderate Low strength	 0.50

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
49: Carlinton-----	55	Moderate Low strength Landslides	0.50 0.12	Poorly suited Wetness Low strength Landslides Slope	1.00 0.50 0.50 0.50	Severe Low strength	1.00
Seddow-----	35	Moderate Low strength Landslides	0.50 0.12	Moderately suited Landslides Slope	0.50 0.50	Severe Low strength	1.00
50: Caseycreek-----	80	Moderate Sandiness Low strength	0.50 0.50	Moderately suited Low strength Landslides	0.50 0.50	Severe Low strength	1.00
51: Cavendish-----	75	Moderate Low strength	0.50	Moderately suited Low strength Landslides	0.50 0.50	Severe Low strength	1.00
52: Cavendish-----	45	Moderate Low strength Landslides	0.50 0.27	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Taney-----	40	Moderate Low strength Landslides	0.50 0.27	Moderately suited Slope Low strength Landslides Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
53: Cobbler-----	55	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 1.00 1.00 0.50	Severe Low strength	1.00
Aldermand-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 1.00 0.50 0.50	Severe Low strength	1.00
54: Cobbler-----	50	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 1.00 1.00 0.50	Severe Low strength	1.00
Noil-----	45	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Landslides	1.00 1.00 0.50	Moderate Low strength	0.50
55: Cranberry-----	60	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00



# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Riswold-----	20	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
56: Crumarine-----	95	Moderate Wetness Low strength	0.50 0.50	Moderately suited Low strength Landslides	0.50 0.10	Severe Low strength	1.00
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Moderate Low strength Landslides	0.50 0.09	Moderately suited Low strength Landslides Slope Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
59: Driscoll-----	45	Moderate Landslides Slope	0.45 0.50	Moderately suited Slope Low strength Landslides Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
Larkin-----	35	Moderate Landslides Slope	0.45 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
60: Dullaxe, high elevation-----	45	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Dullaxe-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
61: Dullaxe, dry-----	60	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Dullaxe, wet-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
62: Dullaxe-----	50	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Brodeer-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
63: Dullaxe-----	60	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Brodeer-----	25	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
64: Dullaxe-----	60	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Judgetown-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
65: Dullaxe-----	70	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Judgetown, moist----	25	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
66: Dullaxe-----	55	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Jury, moist-----	30	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
67: Dumps, wood slash----	100	Not rated		Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68: Dworshak-----	85	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
69: Dworshak-----	80	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Brequito-----	15	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
70: Elkberry-----	45	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Elkberry, wet-----	30	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
71: Elkberry-----	45	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Dworshak-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
72: Elkridge-----	55	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Riswold-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
73: Elkridge-----	65	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73: Riswold-----	30	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
74: Fico, dry-----	55	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Hucberit, warm-----	35	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
75: Fico-----	50	Moderate Slope Landslides	 0.50 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Weitas-----	40	Severe Low strength Slope Landslides	 1.00 0.50 0.60	Poorly suited Low strength Slope Landslides	 1.00 1.00 0.50	Severe Low strength	 1.00
76: Flewsie, high precipitation-----	75	Severe Slope	 1.00	Poorly suited Slope Low strength	 1.00 0.50	Severe Low strength	 1.00
77: Flewsie, low precipitation-----	70	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Flewsie, dry-----	20	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
78: Floodwood-----	75	Severe Slope Low strength	 1.00 0.50	Poorly suited Slope Low strength	 1.00 0.50	Severe Low strength	 1.00
79: Floodwood, warm-----	45	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79: Keeler-----	40	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
80: Floodwood-----	50	Moderate Slope	0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Keeler, warm-----	30	Moderate Slope	0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
81: Floodwood-----	50	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Keeler, warm-----	30	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
82: Flumecreek-----	85	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
83: Flumecreek-----	65	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Stepoff-----	20	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Dworshak, dry-----	15	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
84: Fordcreek-----	70	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
85: Fordcreek-----	80	Moderate Low strength Landslides	0.50 0.15	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86: Garveson, high precipitation-----	55	Severe Slope	1.00	Poorly suited Slope	1.00	Severe Low strength	1.00
				Low strength	0.50		
Floodwood-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Severe Low strength	1.00
		Low strength	0.50	Low strength	0.50		
87: Gramil-----	60	Moderate Low strength	0.50	Poorly suited Ponding	1.00	Severe Low strength	1.00
				Wetness	1.00		
				Low strength	0.50		
				Landslides	0.50		
Lewhand-----	30	Severe Wetness	1.00	Moderately suited Wetness	0.50	Severe Low strength	1.00
		Flooding	0.50	Low strength	0.50		
		Low strength	0.50	Flooding	0.50		
				Landslides	0.50		
88: Gramil-----	50	Moderate Low strength	0.50	Poorly suited Ponding	1.00	Severe Low strength	1.00
				Wetness	1.00		
				Low strength	0.50		
				Landslides	0.50		
Reggear-----	40	Moderate Low strength	0.50	Moderately suited Low strength	0.50	Severe Low strength	1.00
				Landslides	0.50		
				Wetness	0.50		
89: Grandad-----	85	Moderate Slope	0.50	Poorly suited Slope	1.00	Severe Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
90: Grandad, dry-----	70	Moderate Slope	0.50	Poorly suited Slope	1.00	Severe Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Grandad-----	20	Moderate Slope	0.50	Poorly suited Slope	1.00	Severe Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
91: Grandad, dry-----	70	Severe Slope	1.00	Poorly suited Slope	1.00	Severe Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
91: Grandad-----	20	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
92: Grandad-----	55	Moderate Slope Landslides	 0.50 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Rettig-----	40	Moderate Slope Landslides	 0.50 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
93: Grandad, wet-----	60	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Rettig, wet-----	35	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
94: Grandad, dry-----	45	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Scand-----	40	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
95: Grangemont-----	60	Moderate Low strength Landslides	 0.50 0.24	Moderately suited Low strength Landslides Slope	 0.50 0.50 0.50	Severe Low strength	 1.00
Kauder-----	35	Moderate Low strength Landslides	 0.50 0.24	Moderately suited Low strength Landslides Slope	 0.50 0.50 0.50	Severe Low strength	 1.00
96: Grangemont, dry-----	50	Moderate Low strength Landslides	 0.50 0.24	Moderately suited Low strength Landslides Slope	 0.50 0.50 0.50	Severe Low strength	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
96: Kauder, dry-----	40	Moderate Low strength Landslides	0.50 0.24	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
97: Grangemont-----	60	Moderate Landslides Low strength	0.24 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Kauder, moist-----	30	Moderate Landslides Low strength	0.24 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
98: Grangemont, wet-----	45	Moderate Slope Landslides	0.50 0.45	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Riswold-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
99: Grasshopper-----	80	Moderate Wetness Flooding Low strength	0.50 0.50 0.50	Moderately suited Low strength Flooding Landslides	0.50 0.50 0.10	Severe Low strength	1.00
100: Gwin-----	45	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Kettenbach-----	40	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
101: Gwin-----	45	Severe Restrictive layer Landslides Slope	1.00 0.39 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Kettenbach-----	30	Moderate Restrictive layer Landslides Slope	0.50 0.39 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00



# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101: Keuterville-----	20	Moderate Landslides Slope	0.39 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
102: Hildebrand-----	55	Moderate Low strength	0.50	Moderately suited Low strength Landslides	0.50 0.50	Severe Low strength	1.00
Spacecreek, dry-----	35	Moderate Low strength	0.50	Moderately suited Low strength Landslides	0.50 0.50	Severe Low strength	1.00
103: Hubub, wet-----	75	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
104: Hubub, wet-----	65	Moderate Slope Landslides	0.50 0.30	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
Dworshak-----	30	Moderate Slope Landslides	0.50 0.30	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
105: Hubub-----	65	Moderate Landslides Slope	0.45 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Lostpete-----	20	Moderate Landslides Slope	0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
106: Hucberit-----	85	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
107: Hucberit-----	40	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107: Vaywood, high precipitation-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
108: Hugus-----	85	Moderate Slope Landslides Sandiness	0.50 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
109: Hugus-----	90	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
110: Hugus, moist-----	75	Moderate Landslides Slope Sandiness	0.60 0.50 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
111: Hugus, high precipitation-----	75	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
112: Hugus, moist-----	75	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Hugus-----	15	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
113: Hugus-----	60	Moderate Slope Landslides Sandiness	0.50 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Dworshak-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
114: Itzee-----	90	Moderate Sandiness	0.50	Well suited Landslides	0.10	Moderate Low strength	0.50

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
115: Jacket-----	80	Moderate Landslides Slope	0.48 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
116: Jacket-----	85	Moderate Low strength	0.50	Moderately suited Low strength Slope	0.50 0.50	Severe Low strength	1.00
117: Jacket-----	45	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Wellsbench-----	35	Moderate Slope Landslides Stickiness/slope Restrictive layer	0.50 0.60 0.50 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
118: Jacot-----	45	Moderate Slope Sandiness	0.50 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Garveson-----	35	Moderate Slope	0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
119: Jacot-----	45	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Garveson-----	35	Severe Slope	1.00	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
120: Jaype-----	50	Moderate Slope Landslides	0.50 0.54	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Revling-----	35	Moderate Slope Landslides	0.50 0.54	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
121: Jaype, dry-----	65	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Revling, dry-----	15	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
122: Jaype-----	50	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Statemeadow-----	25	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
123: Joel-----	50	Moderate Low strength Landslides	0.50 0.24	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
Setters-----	30	Moderate Low strength Landslides	0.50 0.24	Poorly suited Wetness Low strength Landslides Slope	1.00 0.50 0.50 0.50	Severe Low strength	1.00
124: Johnson-----	75	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
125: Johnson-----	55	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Swayne-----	25	Moderate Slope Landslides Stickiness/slope	0.50 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
126: Johnson-----	45	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Swayne-----	40	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127: Johnson-----	50	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Texascreek-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
128: Jury-----	80	Moderate Landslides Slope	0.45 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
129: Jury-----	85	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
130: Jury, cold-----	90	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
131: Jury-----	55	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Weitas-----	35	Severe Low strength Slope Landslides	1.00 0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 1.00 0.50	Severe Low strength	1.00
132: Jury-----	60	Moderate Landslides Slope	0.30 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Weitas-----	30	Severe Low strength Landslides Slope	1.00 0.30 0.50	Poorly suited Low strength Slope Landslides	1.00 0.50 0.50	Severe Low strength	1.00
133: Kauder-----	80	Moderate Low strength Landslides	0.50 0.24	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
134: Keeler, dry-----	50	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Keeler-----	30	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
135: Keeler, moist-----	65	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Keeler-----	20	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
136: Keeler-----	55	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Aldermant-----	30	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
137: Keeler-----	50	Severe Slope	 1.00	Poorly suited Slope Low strength	 1.00 0.50	Severe Low strength	 1.00
Jacot-----	30	Severe Slope	 1.00	Poorly suited Slope Low strength	 1.00 0.50	Severe Low strength	 1.00
138: Keeler-----	55	Moderate Slope Landslides	 0.50 0.54	Moderately suited Slope Low strength Landslides	 0.50 0.50 0.50	Severe Low strength	 1.00
Lado-----	20	Moderate Slope Landslides	 0.50 0.54	Moderately suited Slope Low strength Landslides	 0.50 0.50 0.50	Severe Low strength	 1.00
139: Kettenbach-----	40	Severe Slope Landslides	 1.00 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
139: Gwin-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140: Kettenbach-----	45	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Keuterville-----	30	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
141: Keuterville-----	80	Moderate Landslides Slope	0.39 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
142: Keuterville-----	65	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
143: Keuterville-----	65	Severe Slope	1.00	Poorly suited Slope	1.00	Moderate Low strength	0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
144: Klickson-----	85	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
145: Klickson-----	70	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
146: Klickson-----	50	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Agatha-----	35	Severe Slope Landslides	1.00 1.00	Poorly suited Slope Landslides Low strength	1.00 1.00 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
147:							
Klickson-----	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Kettenbach-----	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
148:							
Klickson-----	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Rock outcrop-----	20	Not rated		Not rated		Not rated	
Kettenbach-----	15	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
149:							
Konkol-----	45	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.57	Low strength	0.50		
				Landslides	0.50		
Revling-----	25	Moderate		Moderately suited		Severe	
		Slope	0.50	Slope	0.50	Low strength	1.00
		Landslides	0.54	Low strength	0.50		
				Landslides	0.50		
150:							
Kooskia-----	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Wetness	1.00	Low strength	1.00
		Landslides	0.30	Slope	0.50		
				Low strength	0.50		
				Landslides	0.50		
151:							
Kooskia-----	80	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
		Landslides	0.04	Low strength	0.50		
				Landslides	0.50		
152:							
Kruse-----	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
153:							
Kruse-----	75	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.60	Landslides	0.50		
		Low strength	0.50				



# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
154: Kruse-----	50	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
Aldermant-----	40	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
155: Kruse-----	50	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
Aldermant-----	35	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
156: Kruse-----	55	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
McCrosket, dry-----	40	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Landslides	1.00 0.50	Slight Strength	0.10
157: Kruse-----	70	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
Noil-----	20	Moderate Slope Landslides Sandiness	0.50 0.60 0.50	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
158: Kruse-----	45	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
Teakean-----	40	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
159: Larkin-----	50	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
159: Driscoll-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides Wetness	1.00 0.50 0.50 0.50	Severe Low strength	1.00
160: Lebaron-----	45	Moderate Low strength	0.50	Moderately suited Wetness Low strength Landslides	0.50 0.50 0.50 0.10	Severe Low strength	1.00
Latahco-----	40	Moderate Flooding Low strength	0.50 0.50	Moderately suited Wetness Low strength Flooding Landslides	0.50 0.50 0.50 0.50	Severe Low strength	1.00
161: Lewhand-----	65	Severe Wetness Flooding Low strength	1.00 0.50 0.50	Moderately suited Wetness Low strength Flooding Landslides	0.50 0.50 0.50 0.50	Severe Low strength	1.00
Burntcreek-----	20	Severe Wetness Flooding Low strength	1.00 0.50 0.50	Moderately suited Low strength Flooding Landslides	0.50 0.50 0.50 0.10	Severe Low strength	1.00
162: Lewhand-----	80	Severe Wetness Flooding Low strength	1.00 0.50 0.50	Moderately suited Wetness Low strength Flooding Landslides	0.50 0.50 0.50 0.50	Severe Low strength	1.00
Teneb-----	15	Severe Flooding Wetness Low strength	1.00 1.00 0.50	Poorly suited Flooding Wetness Low strength Landslides	1.00 1.00 0.50 0.50	Severe Low strength	1.00
163: Longbar-----	55	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Bigtalk-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
164: Longbar-----	55	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
Bigtalk-----	35	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
165: Longpen-----	75	Moderate Slope Landslides	 0.50 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
166: Longpen-----	60	Slight Landslides	 0.24	Moderately suited Low strength Landslides Slope	 0.50 0.50 0.50	Severe Low strength	 1.00
167: Meland-----	50	Moderate Restrictive layer Low strength	 0.50 0.50	Moderately suited Low strength Slope	 0.50 0.50	Severe Low strength	 1.00
Jacket-----	40	Moderate Low strength	 0.50	Moderately suited Low strength Slope	 0.50 0.50	Severe Low strength	 1.00
168: Meland-----	55	Moderate Restrictive layer Slope	 0.50 0.50	Moderately suited Slope Low strength	 0.50 0.50	Severe Low strength	 1.00
Keuterville-----	30	Moderate Slope	 0.50	Poorly suited Slope	 1.00	Moderate Low strength	 0.50
169: Mushel-----	60	Moderate Slope Landslides	 0.50 0.60	Poorly suited Low strength Slope Landslides	 1.00 1.00 0.50	Severe Low strength	 1.00
Brodeer-----	30	Moderate Slope Landslides	 0.50 0.60	Poorly suited Slope Low strength Landslides	 1.00 0.50 0.50	Severe Low strength	 1.00
170: Mushel-----	50	Severe Slope Landslides Low strength	 1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	 1.00 1.00 0.50	Severe Low strength	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
170: Dullaxe-----	45	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
171: Nakarna, high precipitation-----	75	Moderate Slope	0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
172: Nakarna, high precipitation-----	75	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
173: Nakarna-----	45	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
Nakarna, warm-----	35	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
174: Narnett-----	60	Moderate Landslides Slope	0.45 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
Jury-----	20	Moderate Landslides Slope	0.45 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
175: Neva-----	80	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
176: Newlig-----	85	Moderate Low strength Landslides	0.50 0.24	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
177: Noil-----	45	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
Keeler-----	30	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
178: Noil-----	70	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Landslides	1.00 0.50	Moderate Low strength	0.50
Bouldercreek, warm--	15	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179: Norwidge, moist----	50	Moderate Landslides Slope	0.30 0.50	Poorly suited Low strength Slope Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Threebear, moist----	45	Moderate Landslides Slope	0.30 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50	Severe Low strength	1.00
180: Odonnell-----	65	Moderate Slope Landslides	0.50 0.39	Moderately suited Slope Low strength Landslides Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
Grandad-----	15	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
181: Odonnell-----	75	Moderate Slope	0.50	Poorly suited Slope Wetness Low strength	1.00 0.50 0.50	Severe Low strength	1.00
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Moderate Flooding	0.50	Moderately suited Flooding Landslides	0.50 0.10	Moderate Low strength	0.50
Itzee-----	15	Moderate Sandiness	0.50	Well suited Landslides	0.10	Moderate Low strength	0.50
183: Pits, quarry-----	100	Not rated		Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
184:							
Placer-----	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Dowper-----	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Grangemont-----	15	Moderate		Moderately suited		Severe	
		Landslides	0.45	Slope	0.50	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
185:							
Poorman, dry-----	70	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
186:							
Poorman, dry-----	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Poorman-----	30	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
187:							
Poorman-----	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Grandad-----	35	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
188:							
Poorman-----	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Grandad-----	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
189: Poorman-----	75	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Grandad, dry-----	20	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
190: Poorman-----	40	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Grandad, dry-----	35	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
191: Reggear-----	55	Moderate Low strength Landslides	0.50 0.24	Moderately suited Low strength Landslides Slope Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
Kauder-----	25	Moderate Low strength Landslides	0.50 0.24	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
192: Reggear-----	50	Moderate Low strength Landslides	0.50 0.15	Moderately suited Low strength Landslides Slope Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
Seddow-----	30	Moderate Low strength Landslides	0.50 0.15	Moderately suited Landslides Slope	0.50 0.50	Severe Low strength	1.00
193: Rettig, high elevation-----	80	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
194: Rettig-----	80	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
195: Rettig, cold-----	90	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
196: Rettig, cool-----	50	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Rettig, dry-----	40	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
197: Rettig-----	45	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Grandad-----	30	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
198: Rettig, warm, dry---	60	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Township-----	25	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
199: Rettig-----	40	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Township, wet-----	25	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Stepoff-----	15	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00



# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings	Suitability for log landings		Soil rutting hazard	
			Rating class and limiting features	Value	Rating class and limiting features	Value
200:						
Riswold-----	50	Moderate			Severe	
		Slope	0.50	Moderately suited		
		Landslides	0.30	Low strength	0.50	Low strength
				Landslides	0.50	1.00
				Slope	0.50	
Cranberry-----	45	Moderate		Moderately suited		Severe
		Low strength	0.50	Low strength	0.50	Low strength
		Landslides	0.15	Landslides	0.50	1.00
				Slope	0.50	
201:						
Riswold-----	45	Moderate		Poorly suited		Severe
		Slope	0.50	Slope	1.00	Low strength
		Landslides	0.60	Low strength	0.50	1.00
				Landslides	0.50	
Grangemont-----	40	Moderate		Moderately suited		Severe
		Slope	0.50	Slope	0.50	Low strength
		Landslides	0.45	Low strength	0.50	1.00
				Landslides	0.50	
202:						
Rock outcrop-----	35	Not rated		Not rated		Not rated
Whiskeycreek-----	30	Severe		Poorly suited		Moderate
		Slope	1.00	Slope	1.00	Low strength
		Landslides	0.60	Landslides	0.50	0.50
Texascreek, dry-----	25	Severe		Poorly suited		Severe
		Slope	1.00	Slope	1.00	Low strength
		Landslides	0.60	Low strength	0.50	1.00
				Landslides	0.50	
203:						
Scaler-----	85	Moderate		Poorly suited		Severe
		Slope	0.50	Slope	1.00	Low strength
		Landslides	0.60	Low strength	0.50	1.00
				Landslides	0.50	
204:						
Scaler-----	60	Severe		Poorly suited		Severe
		Slope	1.00	Slope	1.00	Low strength
		Landslides	0.60	Low strength	0.50	1.00
				Landslides	0.50	
Grandad-----	20	Severe		Poorly suited		Severe
		Slope	1.00	Slope	1.00	Low strength
		Landslides	0.60	Low strength	0.50	1.00
		Low strength	0.50	Landslides	0.50	
205:						
Scaler-----	60	Severe		Poorly suited		Severe
		Slope	1.00	Slope	1.00	Low strength
		Landslides	0.60	Low strength	0.50	1.00
				Landslides	0.50	

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
205: Grangemont-----	30	Moderate Landslides Slope	0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
206: Scand-----	65	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Scaler-----	15	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
207: Seddow-----	75	Moderate Landslides Slope Restrictive layer	0.45 0.50 0.50	Moderately suited Slope Landslides	0.50 0.50	Severe Low strength	1.00
208: Seddow-----	85	Moderate Slope Landslides Restrictive layer	0.50 0.60 0.50	Poorly suited Slope Landslides	1.00 0.50	Severe Low strength	1.00
209: Seddow-----	80	Moderate Low strength Landslides	0.50 0.15	Moderately suited Landslides Slope	0.50 0.50	Severe Low strength	1.00
210: Setters-----	80	Moderate Low strength Landslides	0.50 0.03	Poorly suited Ponding Wetness Low strength Landslides	1.00 1.00 0.50 0.50	Severe Low strength	1.00
211: Shattuck-----	90	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
212: Shattuck-----	90	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
213: Shattuck, moist----	90	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214: Shattuck, moist-----	50	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Dworshak, moist-----	40	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
215: Shattuck-----	60	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Dworshak-----	35	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
216: Sly-----	80	Moderate Low strength Landslides	0.50 0.15	Poorly suited Low strength Landslides Slope	1.00 0.50 0.50	Severe Low strength	1.00
Wilkins-----	15	Severe Flooding Low strength	1.00 0.50	Poorly suited Flooding Wetness Low strength Landslides	1.00 0.50 0.50 0.10	Severe Low strength	1.00
217: Southwick-----	85	Moderate Low strength Landslides	0.50 0.09	Moderately suited Low strength Landslides Slope Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
218: Southwick-----	45	Moderate Slope	0.50	Moderately suited Slope Low strength Wetness	0.50 0.50 0.50	Severe Low strength	1.00
Larkin-----	40	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
219: Statemeadow-----	65	Moderate Low strength Landslides	0.50 0.15	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
219: Reggear-----	25	Moderate Low strength Landslides	0.50 0.15	Moderately suited Low strength Landslides Slope Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00
220: Swayne-----	85	Moderate Slope Landslides Stickiness/slope	0.50 0.30 0.50	Moderately suited Slope Low strength Landslides	0.50 0.50 0.50 0.50	Severe Low strength	1.00
221: Taney-----	80	Moderate Low strength Landslides	0.50 0.06	Moderately suited Low strength Landslides Wetness	0.50 0.50 0.50	Severe Low strength	1.00
222: Taney-----	50	Moderate Slope Stickiness/slope	0.50 0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
Joel-----	35	Moderate Slope	0.50	Moderately suited Slope Low strength	0.50 0.50	Severe Low strength	1.00
223: Taney-----	65	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides Wetness	1.00 0.50 0.50 0.50	Severe Low strength	1.00
McCrosket-----	25	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Landslides	1.00 0.50	Slight Strength	0.10
224: Taney-----	55	Moderate Low strength Landslides	0.50 0.03	Moderately suited Low strength Landslides Wetness	0.50 0.50 0.50	Severe Low strength	1.00
Setters-----	35	Moderate Low strength Landslides	0.50 0.03	Poorly suited Ponding Wetness Low strength Landslides	1.00 1.00 1.00 0.50 0.50	Severe Low strength	1.00
225: Taney-----	40	Moderate Low strength Landslides	0.50 0.27	Moderately suited Slope Low strength Landslides Wetness	0.50 0.50 0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
225: Setters-----	40	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
		Landslides	0.27	Slope	0.50		
				Low strength	0.50		
				Landslides	0.50		
226: Teakean-----	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
227: Teneb-----	85	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Wetness	1.00		
		Low strength	0.50	Low strength	0.50		
				Landslides	0.50		
228: Texascreek-----	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Rock outcrop-----	25	Not rated		Not rated		Not rated	
229: Texascreek, dry-----	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Whiskeycreek-----	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Landslides	0.60	Landslides	0.50		
230: Norwidge-----	45	Moderate		Poorly suited		Severe	
		Landslides	0.30	Low strength	1.00	Low strength	1.00
		Slope	0.50	Slope	0.50		
				Landslides	0.50		
Threebear-----	45	Moderate		Moderately suited		Severe	
		Landslides	0.30	Slope	0.50	Low strength	1.00
		Slope	0.50	Low strength	0.50		
				Landslides	0.50		
231: Tomodo-----	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
232:							
Tomodo-----	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Lado-----	15	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
233:							
Township-----	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Rettig-----	25	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
234:							
Township-----	65	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Rettig-----	25	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
235:							
Township, dry-----	45	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
				Landslides	0.50		
Rettig, low precipitation-----	25	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
Nakarna, dry-----	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Landslides	0.60	Low strength	0.50		
		Low strength	0.50	Landslides	0.50		
236:							
Trappercreek-----	50	Moderate		Poorly suited		Severe	
		Low strength	0.50	Low strength	1.00	Low strength	1.00
		Landslides	0.15	Landslides	0.50		
				Slope	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
236: Narnett-----	35	Moderate Low strength Landslides	0.50 0.15	Moderately suited Low strength Landslides Slope	0.50 0.50 0.50	Severe Low strength	1.00
237: Uvi-----	65	Severe Slope Landslides Low strength	1.00 0.60 0.50	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
238: Uvi-----	90	Severe Slope Low strength	1.00 0.50	Poorly suited Slope Low strength	1.00 0.50	Severe Low strength	1.00
239: Vaywood, high precipitation-----	60	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Vaywood, dry-----	30	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
240: Vaywood-----	85	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
241: Vaywood-----	65	Moderate Slope Landslides	0.50 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Handoff-----	20	Moderate Slope Landslides Sandiness	0.50 0.60 0.50	Poorly suited Low strength Slope Landslides	1.00 1.00 0.50	Severe Low strength	1.00
242: Water-----	100	Not rated		Not rated		Not rated	
243: Wellsbench-----	80	Moderate Stickiness/slope Low strength Landslides	0.50 0.50 0.03	Moderately suited Low strength Landslides	0.50 0.50	Severe Low strength	1.00

# Soil Survey of Clearwater Area, Idaho

Table 13.—Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
244: Wellsbench-----	50	Severe Slope Landslides	1.00 0.60	Poorly suited Slope Low strength Landslides	1.00 0.50 0.50	Severe Low strength	1.00
Lacy-----	30	Severe Slope	1.00	Poorly suited Slope	1.00	Severe Low strength	1.00
245: Wilkins-----	85	Severe Flooding Low strength	1.00 0.50	Poorly suited Flooding Wetness Low strength Landslides	1.00 0.50 0.50 0.10	Severe Low strength	1.00



# Soil Survey of Clearwater Area, Idaho

**Table 14.**—Hazard of Erosion and Suitability for Roads on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 1.00 0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 1.00 0.50
3: Agatha-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 1.00 0.50
4: Ahsahka-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Fordcreek-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
5: Ahsahka-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Whiskeycreek-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
6: Aldermant-----	85	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
7: Aldermant-----	90	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8: Aldermant, dry-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
9: Aquandic Cryaquepts	90	Slight		Slight		Poorly suited Flooding	1.00
10: Aquandic Endoaquepts	60	Slight		Slight		Poorly suited Flooding Low strength	1.00 0.50
Aquandic Dystrudepts	20	Slight		Slight		Moderately suited Flooding	0.50
11: Bandmill, dry-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grangemont-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength Landslides	0.50 0.50 0.24
Bargamin-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	0.50 0.54 0.50
12: Bandmill-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.21
Riswold-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope Landslides	0.50 0.50 0.21
13: Berthahill, moist---	75	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Handoff-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 1.00 0.60
14: Berthahill-----	70	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14: Handoff-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
15: Berthahill-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Shattuck-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
16: Bigtalk, cool-----	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Bigtalk, wet-----	25	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
17: Bigtalk-----	80	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
18: Bigtalk, cool-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Floodwood, cool-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
19: Bigtalk, cool-----	75	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Keeler, cool-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion	Value	Hazard of erosion on roads and trails	Value	Suitability for roads (natural surface)	
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	Value
20: Boulder creek, moist	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
21: Boulder creek-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
22: Boulder creek-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
23: Boulder creek, moist	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Brodeer-----	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
24: Boulder creek-----	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Brodeer-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
25: Boulder creek-----	55	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Judgetown-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
26: Boulder creek, high precipitation-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Marble creek-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
27: Boulder creek, cool, dry-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rettig, cool-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
28: Brequito, dry-----	65	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
29: Brequito-----	45	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grangemont-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
30: Brequito-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Lado, dry-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
31: Brequito-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.15
Lado, dry-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.15
32: Brequito-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion	Value	Hazard of erosion on roads and trails	Value	Suitability for roads (natural surface)	
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	Value
32: Mushel-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 1.00 0.60
33: Brequito-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Mushel-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
34: Brodeer, dry-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Brodeer-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
35: Brodeer-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Mushel-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 1.00 0.60
36: Brodeer, warm-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Mushel, dry-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 1.00 0.60
37: Brodeer-----	65	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Bouldercreek-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
38: Brodeer-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Flewsie, dry-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
39: Brodeer-----	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Lostpete-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
40: Brodeer, moist-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Lostpete, moist-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
41: Brodeer, dry-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Mushel-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
42: Brodeer-----	60	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Mushel-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
43: Burntcreek-----	80	Slight		Slight		Moderately suited Low strength Flooding	0.50 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44: Campra-----	80	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
45: Campra-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
Sly-----	40	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Poorly suited Low strength Slope Landslides	1.00 0.50 0.30
46: Carlinton-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Wetness Landslides Low strength	1.00 1.00 0.60 0.50
47: Carlinton-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Wetness Low strength Slope Landslides	1.00 0.50 0.50 0.21
48: Carlinton-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Wetness Low strength Slope Landslides	1.00 0.50 0.50 0.15
Kruse-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.30
49: Carlinton-----	55	Slight		Severe Slope/erodibility	0.95	Poorly suited Wetness Low strength Slope Landslides	1.00 0.50 0.50 0.12
Seddow-----	35	Slight		Severe Slope/erodibility	0.95	Moderately suited Slope Landslides	0.50 0.12
50: Caseycreek-----	80	Slight		Slight		Moderately suited Low strength	0.50
51: Cavendish-----	75	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50



# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52: Cavendish-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength Landslides	0.50 0.50 0.27
Taney-----	40	Slight		Severe Slope/erodibility	0.95	Moderately suited Slope Low strength Wetness Landslides	0.50 0.50 0.50 0.27
53: Cobbler-----	55	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
Aldermant-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
54: Cobbler-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
Noil-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
55: Cranberry-----	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Riswold-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
56: Crumarine-----	95	Slight		Slight		Moderately suited Low strength	0.50
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope Wetness Landslides	0.50 0.50 0.50 0.09

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
59: Driscoll-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength Wetness	0.50 0.45 0.50 0.50
Larkin-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
60: Dullaxe, high Elevation-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dullaxe-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
61: Dullaxe, dry-----	60	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dullaxe, wet-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
62: Dullaxe-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Brodeer-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
63: Dullaxe-----	60	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Brodeer-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64: Dullaxe-----	60	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Judgetown-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
65: Dullaxe-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Judgetown, moist----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
66: Dullaxe-----	55	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Jury, moist-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
67: Dumps, wood slash---	100	Not rated		Not rated		Not rated	
68: Dworshak-----	85	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
69: Dworshak-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Brequito-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
70: Elkberry-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion	Value	Hazard of erosion on roads and trails	Value	Suitability for roads (natural surface)	
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	Value
70: Elkberry, wet-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
71: Elkberry-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dworshak-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
72: Elkridge-----	55	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Riswold-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
73: Elkridge-----	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Riswold-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
74: Fico, dry-----	55	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Hucberit, warm-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
75: Fico-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Weitas-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 1.00 0.60

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
76: Flewsie, high precipitation-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
77: Flewsie, low precipitation-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Flewsie, dry-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
78: Floodwood-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
79: Floodwood, warm-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Keeler-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
80: Floodwood-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Keeler, warm-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
81: Floodwood-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Keeler, warm-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
82: Flumecreek-----	85	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
83: Flumecreek-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Stepoff-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dworshak, dry-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
84: Fordcreek-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
85: Fordcreek-----	80	Slight		Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.15
86: Garveson, high precipitation-----	55	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Floodwood-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
87: Gramil-----	60	Slight		Slight		Poorly suited Wetness Low strength	1.00 0.50
Lewhand-----	30	Slight		Slight		Moderately suited Wetness Low strength Flooding	0.50 0.50 0.50
88: Gramil-----	50	Slight		Moderate Slope/erodibility	0.50	Poorly suited Wetness Low strength	1.00 0.50
Reggear-----	40	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Wetness	0.50 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89: Grandad-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
90: Grandad, dry-----	70	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad-----	20	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
91: Grandad, dry-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
92: Grandad-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rettig-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
93: Grandad, wet-----	60	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rettig, wet-----	35	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
94: Grandad, dry-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Scand-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
95: Grangemont-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
Kauder-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
96: Grangemont, dry-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
Kauder, dry-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
97: Grangemont-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.24 0.50
Kauder, moist-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.24 0.50
98: Grangemont, wet-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
Riswold-----	35	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
99: Grasshopper-----	80	Slight		Slight		Moderately suited Low strength Flooding	0.50 0.50
100: Gwin-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Kettenbach-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50



# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101: Gwin-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.39 0.50
Kettenbach-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.39 0.50
Keuterville-----	20	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Landslides Low strength	0.50 0.39 0.50
102: Hildebrand-----	55	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50
Spacecreek, dry-----	35	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength	0.50
103: Hubub, wet-----	75	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
104: Hubub, wet-----	65	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope Landslides	0.50 0.50 0.30
Dworshak-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope Landslides	0.50 0.50 0.30
105: Hubub-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
Lostpete-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
106: Hucherit-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107: Hucberit-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Vaywood, high precipitation-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
108: Hugus-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
109: Hugus-----	90	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
110: Hugus, moist-----	75	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
111: Hugus, high precipitation-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
112: Hugus, moist-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Hugus-----	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
113: Hugus-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dworshak-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
114: Itzee-----	90	Slight		Slight		Well suited	

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
115: Jacket-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.48 0.50
116: Jacket-----	85	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope	0.50 0.50
117: Jacket-----	45	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Wellsbench-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
118: Jacot-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Garveson-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
119: Jacot-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Garveson-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
120: Jaype-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	0.50 0.54 0.50
Revling-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	0.50 0.54 0.50
121: Jaype, dry-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Revling, dry-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
122: Jaype-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Statemeadow-----	25	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
123: Joel-----	50	Slight		Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
Setters-----	30	Slight		Severe Slope/erodibility	0.95	Poorly suited Wetness Low strength Slope Landslides	1.00 0.50 0.50 0.24
124: Johnson-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
125: Johnson-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Swayne-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
126: Johnson-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Swayne-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127: Johnson-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Texascreek-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
128: Jury-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
129: Jury-----	85	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
130: Jury, cold-----	90	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
131: Jury-----	55	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Weitas-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
132: Jury-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.30 0.50
Weitas-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Poorly suited Low strength Slope Landslides	1.00 0.50 0.30
133: Kauder-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion	Value	Hazard of erosion on roads and trails	Value	Suitability for roads (natural surface)	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
134: Keeler, dry-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Keeler-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
135: Keeler, moist-----	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Keeler-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
136: Keeler-----	55	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Aldermand-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
137: Keeler-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Jacot-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
138: Keeler-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	0.50 0.54 0.50
Lado-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	0.50 0.54 0.50
139: Kettenbach-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion	Value	Hazard of erosion on roads and trails	Value	Suitability for roads (natural surface)	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
139: Gwin-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140: Kettenbach-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Keuterville-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
141: Keuterville-----	80	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Slope Landslides Low strength	0.50 0.39 0.50
142: Keuterville-----	65	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
143: Keuterville-----	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
144: Klickson-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
145: Klickson-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
146: Klickson-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Agatha-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
147: Klickson-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Kettenbach-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
148: Klickson-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rock outcrop-----	20	Not rated		Not rated		Not rated	
Kettenbach-----	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
149: Konkol-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	0.50 0.57 0.50
Revling-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	0.50 0.54 0.50
150: Kooskia-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Wetness Slope Low strength Landslides	1.00 0.50 0.50 0.30
151: Kooskia-----	80	Slight		Moderate Slope/erodibility	0.50	Poorly suited Wetness Low strength Landslides	1.00 0.50 0.04
152: Kruse-----	85	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
153: Kruse-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60



# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
154: Kruse-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
Aldermant-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
155: Kruse-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
Aldermant-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
156: Kruse-----	55	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
McCrosket, dry-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
157: Kruse-----	70	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Noil-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
158: Kruse-----	45	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Teakean-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
159: Larkin-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Driscoll-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength Wetness	1.00 0.60 0.50 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
160: Lebaron-----	45	Slight		Slight		Moderately suited Wetness Low strength	0.50 0.50
Latahco-----	40	Slight		Slight		Moderately suited Wetness Low strength Flooding	0.50 0.50 0.50
161: Lewhand-----	65	Slight		Slight		Moderately suited Wetness Low strength Flooding	0.50 0.50 0.50
Burntcreek-----	20	Slight		Slight		Moderately suited Low strength Flooding	0.50 0.50
162: Lewhand-----	80	Slight		Slight		Moderately suited Wetness Low strength Flooding	0.50 0.50 0.50
Teneb-----	15	Slight		Slight		Poorly suited Flooding Wetness Low strength	1.00 1.00 0.50
163: Longbar-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Bigtalk-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
164: Longbar-----	55	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Bigtalk-----	35	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
165: Longpen-----	75	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
166: Longpen-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
167: Meland-----	50	Slight		Severe Slope/erodibility	0.95	Moderately suited Low strength Slope	0.50 0.50
Jacket-----	40	Slight		Severe Slope/erodibility	0.95	Moderately suited Low strength Slope	0.50 0.50
168: Meland-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Keuterville-----	30	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Poorly suited Slope	1.00
169: Mushel-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 1.00 0.60
Brodeer-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
170: Mushel-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength Landslides	1.00 1.00 0.60
Dullaxe-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
171: Nakarna, high precipitation-----	75	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
172: Nakarna, high precipitation-----	75	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
173: Nakarna-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
Nakarna, warm-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
174: Narnett-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
Jury-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
175: Neva-----	80	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
176: Newlig-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
177: Noil-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
Keeler-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
178: Noil-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
Boulder creek, warm--	15	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179: Norwidge, moist-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 0.50 0.30

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
179: Threebear, moist-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.30 0.50
180: Odonnell-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength Wetness	0.50 0.39 0.50 0.50
Grandad-----	15	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
181: Odonnell-----	75	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Wetness Low strength	1.00 0.50 0.50
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Slight		Slight		Moderately suited Flooding	0.50
Itzee-----	15	Slight		Moderate Slope/erodibility	0.50	Well suited	
183: Pits, quarry-----	100	Not rated		Not rated		Not rated	
184: Placer-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dowper-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grangemont-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
185: Poorman, dry-----	70	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion	Value	Hazard of erosion on roads and trails	Value	Suitability for roads (natural surface)	
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	Value
186: Poorman, dry-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Poorman-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
187: Poorman-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
188: Poorman-----	50	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
189: Poorman-----	75	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad, dry-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
190: Poorman-----	40	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad, dry-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
191: Reggear-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Wetness Landslides	0.50 0.50 0.50 0.24

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
191: Kauder-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.24
192: Reggear-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Wetness Landslides	0.50 0.50 0.50 0.15
Seddow-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides	0.50 0.15
193: Rettig, high elevation-----	80	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
194: Rettig-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
195: Rettig, cold-----	90	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
196: Rettig, cool-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rettig, dry-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
197: Rettig-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
198:							
Rettig, warm, dry----	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Township-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
199:							
Rettig-----	40	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Township, wet-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Stepoff-----	15	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
200:							
Riswold-----	50	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope Landslides	0.50 0.50 0.30
Cranberry-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.15
201:							
Riswold-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grangemont-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.45 0.50
202:							
Rock outcrop-----	35	Not rated		Not rated		Not rated	
Whiskeycreek-----	30	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
Texascreek, dry-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50



# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
203: Scaler-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
204: Scaler-----	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grandad-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
205: Scaler-----	60	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Grangemont-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
206: Scand-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Scaler-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
207: Seddow-----	75	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides	0.50 0.45
208: Seddow-----	85	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
209: Seddow-----	80	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides	0.50 0.15
210: Setters-----	80	Slight		Moderate Slope/erodibility	0.50	Poorly suited Ponding Wetness Low strength Landslides	1.00 1.00 0.50 0.03

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
211: Shattuck-----	90	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
212: Shattuck-----	90	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
213: Shattuck, moist----	90	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
214: Shattuck, moist----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dworshak, moist----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
215: Shattuck-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Dworshak-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
216: Sly-----	80	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Poorly suited Low strength Slope Landslides	1.00 0.50 0.15
Wilkins-----	15	Slight		Moderate Slope/erodibility	0.50	Poorly suited Flooding Wetness Low strength	1.00 0.50 0.50
217: Southwick-----	85	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Slope Wetness Landslides	0.50 0.50 0.50 0.09

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
218: Southwick-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength Wetness	0.50 0.50 0.50
Larkin-----	40	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
219: Statemeadow-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.15
Reggear-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Wetness Landslides	0.50 0.50 0.50 0.15
220: Swayne-----	85	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.30 0.50
221: Taney-----	80	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Wetness Landslides	0.50 0.50 0.06
222: Taney-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
Joel-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Low strength	0.50 0.50
223: Taney-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength Wetness	1.00 0.60 0.50 0.50
McCrosket-----	25	Moderate Slope/erodibility	0.50	Moderate Slope/erodibility	0.50	Poorly suited Slope Landslides	1.00 0.60
224: Taney-----	55	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Wetness Landslides	0.50 0.50 0.03

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
224: Setters-----	35	Slight		Moderate Slope/erodibility	0.50	Poorly suited Ponding Wetness Low strength Landslides	1.00 1.00 0.50 0.03
225: Taney-----	40	Slight		Severe Slope/erodibility	0.95	Moderately suited Slope Low strength Wetness Landslides	0.50 0.50 0.50 0.27
Setters-----	40	Slight		Severe Slope/erodibility	0.95	Moderately suited Wetness Slope Low strength Landslides	0.50 0.50 0.50 0.27
226: Teakean-----	80	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
227: Teneb-----	85	Slight		Slight		Poorly suited Flooding Wetness Low strength	1.00 1.00 0.50
228: Texascreek-----	55	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rock outcrop-----	25	Not rated		Not rated		Not rated	
229: Texascreek, dry-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Whiskeycreek-----	35	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides	1.00 0.60
230: Norwidge-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 0.50 0.30
Threebear-----	45	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Slope Landslides Low strength	0.50 0.30 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
231: Tomodo-----	80	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
232: Tomodo-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Lado-----	15	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
233: Township-----	55	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rettig-----	25	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
234: Township-----	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rettig-----	25	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
235: Township, dry-----	45	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Rettig, low precipitation-----	25	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Nakarna, dry-----	20	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
236: Trapper Creek-----	50	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 0.50 0.15

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
236: Narnett-----	35	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Moderately suited Low strength Slope Landslides	0.50 0.50 0.15
237: Uvi-----	65	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
238: Uvi-----	90	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Low strength	1.00 0.50
239: Vaywood, high precipitation-----	60	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Vaywood, dry-----	30	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
240: Vaywood-----	85	Very severe Slope/erodibility	0.95	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
241: Vaywood-----	65	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50
Handoff-----	20	Moderate Slope/erodibility	0.50	Severe Slope/erodibility	0.95	Poorly suited Low strength Slope Landslides	1.00 1.00 0.60
242: Water-----	100	Not rated		Not rated		Not rated	
243: Wellsbench-----	80	Slight		Moderate Slope/erodibility	0.50	Moderately suited Low strength Landslides	0.50 0.03
244: Wellsbench-----	50	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope Landslides Low strength	1.00 0.60 0.50

# Soil Survey of Clearwater Area, Idaho

Table 14.—Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion	Value	Hazard of erosion on roads and trails	Value	Suitability for roads (natural surface)	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
244: Lacy-----	30	Severe Slope/erodibility	0.75	Severe Slope/erodibility	0.95	Poorly suited Slope	1.00
245: Wilkins-----	85	Slight		Moderate Slope/erodibility	0.50	Poorly suited Flooding Wetness Low strength	1.00 0.50 0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Value	Suitability for mechanical planting	Value
		Rating class and limiting features		Rating class and limiting features	
1: Agatha, very rocky--	70	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Well suited		Unsuited Slope Rock fragments	1.00 0.50
3: Agatha-----	75	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
4: Ahsahka-----	45	Well suited		Unsuited Slope	1.00
Fordcreek-----	40	Well suited		Unsuited Slope	1.00
5: Ahsahka-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Whiskeycreek-----	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
6: Aldermand-----	85	Moderately suited Slope	0.50	Unsuited Slope	1.00
7: Aldermand-----	90	Moderately suited Slope	0.50	Unsuited Slope	1.00
8: Aldermand, dry-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
9: Aquandic Cryaquepts	90	Well suited		Well suited	
10: Aquandic Endoaquepts	60	Well suited		Well suited	



# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
10: Aquandic Dystrudepts	20	Moderately suited Rock fragments	0.50	Poorly suited Rock fragments	0.75
11: Bandmill, dry-----	40	Well suited		Poorly suited Slope	0.75
Grangemont-----	30	Well suited		Moderately suited Slope	0.50
Bargamin-----	25	Well suited		Poorly suited Slope	0.75
12: Bandmill-----	40	Well suited		Moderately suited Slope	0.50
Riswold-----	30	Well suited		Moderately suited Slope	0.50
13: Berthahill, moist---	75	Well suited		Poorly suited Slope	0.75
Handoff-----	15	Well suited		Poorly suited Slope	0.75
14: Berthahill-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00
Handoff-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00
15: Berthahill-----	65	Well suited		Poorly suited Slope	0.75
Shattuck-----	15	Well suited		Poorly suited Slope	0.75
16: Bigtalk, cool-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Bigtalk, wet-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
17: Bigtalk-----	80	Moderately suited Slope	0.50	Unsuited Slope	1.00
18: Bigtalk, cool-----	50	Well suited		Poorly suited Slope	0.75
Floodwood, cool-----	40	Well suited		Poorly suited Slope Rock fragments	0.75 0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
19: Bigtalk, cool-----	75	Well suited		Poorly suited Slope	0.75
Keeler, cool-----	20	Well suited		Poorly suited Slope	0.75
20: Bouldercreek, moist	85	Well suited		Poorly suited Slope	0.75
21: Bouldercreek-----	75	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
22: Bouldercreek-----	75	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
23: Bouldercreek, moist	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
Brodeer-----	15	Moderately suited Slope	0.50	Unsuited Slope	1.00
24: Bouldercreek-----	65	Moderately suited Slope	0.50	Unsuited Slope	1.00
Brodeer-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
25: Bouldercreek-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Judgetown-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
26: Bouldercreek, high precipitation-----	50	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
Marblecreek-----	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
27: Bouldercreek, cool, dry-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rettig, cool-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Value	Suitability for mechanical planting	Value
		Rating class and limiting features		Rating class and limiting features	
28: Brequito, dry-----	65	Moderately suited Slope	0.50	Unsuited Slope	1.00
29: Brequito-----	45	Well suited		Unsuited Slope	1.00
Grangemont-----	40	Well suited		Poorly suited Slope	0.75
30: Brequito-----	45	Well suited		Poorly suited Slope	0.75
Lado, dry-----	35	Well suited		Poorly suited Slope	0.75
31: Brequito-----	60	Well suited		Moderately suited Slope	0.50
Lado, dry-----	25	Well suited		Moderately suited Slope	0.50
32: Brequito-----	50	Well suited		Poorly suited Slope	0.75
Mushel-----	35	Well suited		Poorly suited Slope	0.75
33: Brequito-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Mushel-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
34: Brodeer, dry-----	55	Well suited		Poorly suited Slope	0.75
Brodeer-----	40	Well suited		Poorly suited Slope	0.75
35: Brodeer-----	45	Well suited		Poorly suited Slope	0.75
Mushel-----	40	Well suited		Poorly suited Slope	0.75
36: Brodeer, warm-----	45	Well suited		Poorly suited Slope	0.75
Mushel, dry-----	30	Well suited		Poorly suited Slope	0.75

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
37: Brodeer-----	65	Well suited		Unsuited Slope	1.00
Boulder creek-----	25	Well suited		Poorly suited Slope	0.75
38: Brodeer-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Flewsie, dry-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
39: Brodeer-----	60	Well suited		Unsuited Slope	1.00
Lostpete-----	35	Well suited		Poorly suited Slope	0.75
40: Brodeer, moist-----	55	Well suited		Poorly suited Slope	0.75
Lostpete, moist-----	30	Well suited		Poorly suited Slope	0.75
41: Brodeer, dry-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Mushel-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
42: Brodeer-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Mushel-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
43: Burnt creek-----	80	Well suited		Well suited	
44: Campra-----	80	Moderately suited Slope Rock fragments Stickiness; high plasticity index	0.50 0.50 0.50	Unsuited Slope Rock fragments Stickiness; high plasticity index	1.00 0.75 0.50
45: Campra-----	45	Moderately suited Rock fragments Stickiness; high plasticity index	0.50 0.50	Unsuited Slope Rock fragments Stickiness; high plasticity index	1.00 0.75 0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
45: Sly-----	40	Well suited		Moderately suited Slope	0.50
46: Carlinton-----	80	Well suited		Poorly suited Slope	0.75
47: Carlinton-----	85	Well suited		Moderately suited Slope	0.50
48: Carlinton-----	50	Well suited		Moderately suited Slope	0.50
Kruse-----	35	Well suited		Moderately suited Slope	0.50
49: Carlinton-----	55	Well suited		Moderately suited Slope	0.50
Seddow-----	35	Well suited		Moderately suited Slope	0.50
50: Caseycreek-----	80	Well suited		Moderately suited Rock fragments	0.50
51: Cavendish-----	75	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50
52: Cavendish-----	45	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50
Taney-----	40	Well suited		Moderately suited Slope	0.50
53: Cobbler-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Aldermand-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
54: Cobbler-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Noil-----	45	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
55: Cranberry-----	60	Well suited		Unsuited Slope	1.00
Riswold-----	20	Well suited		Unsuited Slope	1.00
56: Crumarine-----	95	Well suited		Well suited	
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Well suited		Moderately suited Slope	0.50
59: Driscoll-----	45	Well suited		Poorly suited Slope	0.75
Larkin-----	35	Well suited		Poorly suited Slope	0.75
60: Dullaxe, high elevation-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
Dullaxe-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
61: Dullaxe, dry-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Dullaxe, wet-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
62: Dullaxe-----	50	Well suited		Poorly suited Slope	0.75
Brodeer-----	35	Well suited		Poorly suited Slope	0.75
63: Dullaxe-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Brodeer-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
64: Dullaxe-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Judgetown-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Suitability for mechanical planting		
		Rating class and limiting features	Value	Rating class and limiting features	Value
65: Dullaxe-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00
Judgetown, moist----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
66: Dullaxe-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Jury, moist-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00
67: Dumps, wood slash---	100	Not rated		Not rated	
68: Dworshak-----	85	Moderately suited Slope	0.50	Unsuited Slope	1.00
69: Dworshak-----	80	Well suited		Poorly suited Slope	0.75
Brequito-----	15	Well suited		Poorly suited Slope	0.75
70: Elkberry-----	45	Well suited		Poorly suited Slope	0.75
Elkberry, wet-----	30	Well suited		Poorly suited Slope	0.75
71: Elkberry-----	45	Well suited		Poorly suited Slope	0.75
Dworshak-----	40	Well suited		Poorly suited Slope	0.75
72: Elkridge-----	55	Moderately suited Rock fragments	0.50	Unsuited Slope Rock fragments	1.00 0.50
Riswold-----	40	Well suited		Unsuited Slope	1.00
73: Elkridge-----	65	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.50
Riswold-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
74: Fico, dry-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Hucberit, warm-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
75: Fico-----	50	Well suited		Unsuited Slope	1.00
Weitas-----	40	Well suited		Unsuited Slope	1.00
76: Flewsie, high precipitation-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
77: Flewsie, low precipitation-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00
Flewsie, dry-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00
78: Floodwood-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
79: Floodwood, warm-----	45	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
Keeler-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
80: Floodwood-----	50	Well suited		Poorly suited Slope	0.75
Keeler, warm-----	30	Well suited		Poorly suited Slope	0.75
81: Floodwood-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Keeler, warm-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00
82: Flumecreek-----	85	Moderately suited Slope	0.50	Unsuited Slope	1.00
83: Flumecreek-----	65	Well suited		Poorly suited Slope	0.75



# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
83: Stepoff-----	20	Well suited		Poorly suited Slope Rock fragments	0.75 0.50
Dworshak, dry-----	15	Well suited		Poorly suited Slope	0.75
84: Fordcreek-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00
85: Fordcreek-----	80	Well suited		Moderately suited Slope	0.50
86: Garveson, high precipitation-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Floodwood-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00
87: Gramil-----	60	Well suited		Well suited	
Lewhand-----	30	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50
88: Gramil-----	50	Well suited		Well suited	
Reggear-----	40	Well suited		Well suited	
89: Grandad-----	85	Well suited		Poorly suited Slope	0.75
90: Grandad, dry-----	70	Well suited		Unsuited Slope	1.00
Grandad-----	20	Well suited		Unsuited Slope	1.00
91: Grandad, dry-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00
Grandad-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
92: Grandad-----	55	Well suited		Poorly suited Slope	0.75
Rettig-----	40	Well suited		Poorly suited Slope	0.75
93: Grandad, wet-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rettig, wet-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
94: Grandad, dry-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
Scand-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
95: Grangemont-----	60	Well suited		Moderately suited Slope	0.50
Kauder-----	35	Well suited		Moderately suited Slope	0.50
96: Grangemont, dry-----	50	Well suited		Moderately suited Slope	0.50
Kauder, dry-----	40	Well suited		Moderately suited Slope	0.50
97: Grangemont-----	60	Well suited		Moderately suited Slope	0.50
Kauder, moist-----	30	Well suited		Moderately suited Slope	0.50
98: Grangemont, wet-----	45	Well suited		Poorly suited Slope	0.75
Riswold-----	35	Well suited		Unsuited Slope	1.00
99: Grasshopper-----	80	Well suited		Well suited	
100: Gwin-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100: Kettenbach-----	40	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00
101: Gwin-----	45	Moderately suited Rock fragments	0.50	Poorly suited Rock fragments Slope	0.75 0.75
Kettenbach-----	30	Moderately suited Rock fragments	0.50	Unsuited Rock fragments Slope	1.00 0.75
Keuterville-----	20	Moderately suited Rock fragments	0.50	Poorly suited Slope Rock fragments	0.75 0.75
102: Hildebrand-----	55	Well suited		Moderately suited Slope	0.50
Spacecreek, dry-----	35	Well suited		Moderately suited Slope	0.50
103: Hubub, wet-----	75	Well suited		Unsuited Slope	1.00
104: Hubub, wet-----	65	Well suited		Moderately suited Slope	0.50
Dworshak-----	30	Well suited		Moderately suited Slope	0.50
105: Hubub-----	65	Well suited		Poorly suited Slope	0.75
Lostpete-----	20	Well suited		Poorly suited Slope	0.75
106: Hucberit-----	85	Well suited		Poorly suited Slope	0.75
107: Hucberit-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
Vaywood, high precipitation-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
108: Hugus-----	85	Well suited		Poorly suited Slope	0.75

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Suitability for mechanical planting		
		Rating class and limiting features	Value	Rating class and limiting features	Value
109: Hugus-----	90	Moderately suited Slope	0.50	Unsuited Slope	1.00
110: Hugus, moist-----	75	Well suited		Poorly suited Slope	0.75
111: Hugus, high precipitation-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
112: Hugus, moist-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
Hugus-----	15	Moderately suited Slope	0.50	Unsuited Slope	1.00
113: Hugus-----	60	Well suited		Poorly suited Slope	0.75
Dworshak-----	35	Well suited		Poorly suited Slope	0.75
114: Itzee-----	90	Well suited		Well suited	
115: Jacket-----	80	Well suited		Poorly suited Slope	0.75
116: Jacket-----	85	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50
117: Jacket-----	45	Well suited		Unsuited Slope	1.00
Wellsbench-----	35	Moderately suited Stickiness; high plasticity index	0.50	Unsuited Slope Rock fragments Stickiness; high plasticity index	1.00 0.50 0.50
118: Jacot-----	45	Well suited		Poorly suited Slope	0.75
Garveson-----	35	Well suited		Poorly suited Slope	0.75

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Suitability for mechanical planting		
		Rating class and limiting features	Value	Rating class and limiting features	Value
119: Jacot-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
Garveson-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
120: Jaype-----	50	Well suited		Poorly suited Slope	0.75
Revling-----	35	Well suited		Poorly suited Slope	0.75
121: Jaype, dry-----	65	Well suited		Poorly suited Slope	0.75
Revling, dry-----	15	Well suited		Poorly suited Slope	0.75
122: Jaype-----	50	Well suited		Unsuited Slope	1.00
Statemeadow-----	25	Well suited		Unsuited Slope	1.00
123: Joel-----	50	Well suited		Moderately suited Slope	0.50
Setters-----	30	Well suited		Moderately suited Slope	0.50
124: Johnson-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
125: Johnson-----	55	Well suited		Unsuited Slope	1.00
Swayne-----	25	Moderately suited Stickiness; high plasticity index	0.50	Unsuited Slope Stickiness; high plasticity index	1.00 0.50
126: Johnson-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
Swayne-----	40	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Unsuited Slope Stickiness; high plasticity index	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
127: Johnson-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Texascreek-----	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
128: Jury-----	80	Well suited		Poorly suited Slope	0.75
129: Jury-----	85	Moderately suited Slope	0.50	Unsuited Slope	1.00
130: Jury, cold-----	90	Moderately suited Slope	0.50	Unsuited Slope	1.00
131: Jury-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Weitas-----	35	Well suited		Unsuited Slope	1.00
132: Jury-----	60	Well suited		Moderately suited Slope	0.50
Weitas-----	30	Well suited		Moderately suited Slope	0.50
133: Kauder-----	80	Well suited		Moderately suited Slope	0.50
134: Keeler, dry-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Keeler-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00
135: Keeler, moist-----	65	Moderately suited Slope	0.50	Unsuited Slope	1.00
Keeler-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00
136: Keeler-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Aldermant-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Suitability for mechanical planting		
		Rating class and limiting features	Value	Rating class and limiting features	Value
137: Keeler-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Jacot-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00
138: Keeler-----	55	Well suited		Poorly suited Slope	0.75
Lado-----	20	Well suited		Poorly suited Slope	0.75
139: Kettenbach-----	40	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00
Gwin-----	35	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75
Rock outcrop-----	15	Not rated		Not rated	
140: Kettenbach-----	45	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00
Keuterville-----	30	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75
141: Keuterville-----	80	Moderately suited Rock fragments	0.50	Poorly suited Slope Rock fragments	0.75 0.75
142: Keuterville-----	65	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.75
143: Keuterville-----	65	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated	
144: Klickson-----	85	Well suited		Poorly suited Slope	0.75
145: Klickson-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
146: Klickson-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Agatha-----	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
147: Klickson-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Kettenbach-----	30	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00
148: Klickson-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated	
Kettenbach-----	15	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 1.00
149: Konkol-----	45	Well suited		Poorly suited Slope Rock fragments	0.75 0.50
Revling-----	25	Well suited		Poorly suited Slope	0.75
150: Kooskia-----	80	Well suited		Moderately suited Slope	0.50
151: Kooskia-----	80	Well suited		Moderately suited Slope	0.50
152: Kruse-----	85	Well suited		Unsuited Slope	1.00
153: Kruse-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
154: Kruse-----	50	Well suited		Unsuited Slope	1.00
Aldermand-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00



# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Suitability for mechanical planting		
		Rating class and limiting features	Value	Rating class and limiting features	Value
155: Kruse-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Aldermand-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
156: Kruse-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
McCrosket, dry-----	40	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
157: Kruse-----	70	Well suited		Unsuited Slope	1.00
Noil-----	20	Moderately suited Rock fragments	0.50	Unsuited Slope Rock fragments	1.00 0.50
158: Kruse-----	45	Well suited		Unsuited Slope	1.00
Teakean-----	40	Moderately suited Stickiness; high plasticity index	0.50	Unsuited Slope Stickiness; high plasticity index	1.00 0.50
159: Larkin-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Driscoll-----	35	Well suited		Unsuited Slope	1.00
160: Lebaron-----	45	Well suited		Well suited	
Latahco-----	40	Well suited		Well suited	
161: Lewhand-----	65	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50
Burntcreek-----	20	Well suited		Well suited	
162: Lewhand-----	80	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Value	Suitability for mechanical planting	Value
		Rating class and limiting features		Rating class and limiting features	
162: Teneb-----	15	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50
163: Longbar-----	55	Well suited		Poorly suited Slope	0.75
Bigtalk-----	35	Well suited		Poorly suited Slope	0.75
164: Longbar-----	55	Moderately suited Slope	0.50	Unsuited Slope	1.00
Bigtalk-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
165: Longpen-----	75	Well suited		Unsuited Slope	1.00
166: Longpen-----	60	Well suited		Moderately suited Slope	0.50
167: Meland-----	50	Well suited		Moderately suited Slope	0.50
Jacket-----	40	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50
168: Meland-----	55	Well suited		Poorly suited Slope	0.75
Keuterville-----	30	Well suited		Poorly suited Slope	0.75
169: Mushel-----	60	Well suited		Poorly suited Slope	0.75
Brodeer-----	30	Well suited		Poorly suited Slope	0.75
170: Mushel-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Dullaxe-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
171: Nakarna, high precipitation-----	75	Well suited		Poorly suited Slope	0.75
172: Nakarna, high precipitation-----	75	Moderately suited Slope	0.50	Unsuited Slope	1.00
173: Nakarna-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
Nakarna, warm-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
174: Narnett-----	60	Well suited		Poorly suited Slope	0.75
Jury-----	20	Well suited		Poorly suited Slope	0.75
175: Neva-----	80	Moderately suited Slope	0.50	Unsuited Slope	1.00
176: Newlig-----	85	Well suited		Moderately suited Slope	0.50
177: Noil-----	45	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.50
Keeler-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00
178: Noil-----	70	Moderately suited Slope Rock fragments	0.50 0.50	Unsuited Slope Rock fragments	1.00 0.50
Boulder creek, warm--	15	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rock outcrop-----	15	Not rated		Not rated	
179: Norwidge, moist-----	50	Well suited		Moderately suited Slope	0.50
Threebear, moist----	45	Well suited		Moderately suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
180: Odonnell-----	65	Well suited		Poorly suited Slope	0.75
Grandad-----	15	Well suited		Unsuited Slope	1.00
181: Odonnell-----	75	Well suited		Poorly suited Slope	0.75
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Well suited		Moderately suited Rock fragments	0.50
Itzee-----	15	Well suited		Moderately suited Slope	0.50
183: Pits, quarry-----	100	Not rated		Not rated	
184: Placer-----	40	Well suited		Unsuited Slope	1.00
Dowper-----	30	Well suited		Unsuited Slope	1.00
Grangemont-----	15	Well suited		Poorly suited Slope	0.75
185: Poorman, dry-----	70	Moderately suited Slope	0.50	Unsuited Slope	1.00
186: Poorman, dry-----	60	Well suited		Poorly suited Slope	0.75
Poorman-----	30	Well suited		Poorly suited Slope	0.75
187: Poorman-----	55	Well suited		Poorly suited Slope	0.75
Grandad-----	35	Well suited		Poorly suited Slope	0.75
188: Poorman-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Grandad-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
189: Poorman-----	75	Well suited		Poorly suited Slope	0.75
Grandad, dry-----	20	Well suited		Poorly suited Slope	0.75
190: Poorman-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
Grandad, dry-----	35	Moderately suited Slope	0.50	Unsuited Slope	1.00
191: Reggear-----	55	Well suited		Moderately suited Slope	0.50
Kauder-----	25	Well suited		Moderately suited Slope	0.50
192: Reggear-----	50	Well suited		Moderately suited Slope	0.50
Seddow-----	30	Well suited		Moderately suited Slope	0.50
193: Rettig, high elevation-----	80	Moderately suited Slope	0.50	Unsuited Slope	1.00
194: Rettig-----	80	Well suited		Poorly suited Slope	0.75
195: Rettig, cold-----	90	Well suited		Poorly suited Slope	0.75
196: Rettig, cool-----	50	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rettig, dry-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
197: Rettig-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
Grandad-----	30	Moderately suited Slope	0.50	Unsuited Slope	1.00
198: Rettig, warm, dry---	60	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Suitability for mechanical planting		
		Rating class and limiting features	Value	Rating class and limiting features	Value
198: Township-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
199: Rettig-----	40	Moderately suited Slope	0.50	Unsuited Slope	1.00
Township, wet-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
Stepoff-----	15	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
200: Riswold-----	50	Well suited		Moderately suited Slope	0.50
Cranberry-----	45	Well suited		Moderately suited Slope	0.50
201: Riswold-----	45	Well suited		Poorly suited Slope	0.75
Grangemont-----	40	Well suited		Poorly suited Slope	0.75
202: Rock outcrop-----	35	Not rated		Not rated	
Whiskeycreek-----	30	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
Texascreek, dry-----	25	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
203: Scaler-----	85	Well suited		Poorly suited Slope	0.75
204: Scaler-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Grandad-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00
205: Scaler-----	60	Moderately suited Slope	0.50	Unsuited Slope	1.00
Grangemont-----	30	Well suited		Poorly suited Slope	0.75

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
206: Scand-----	65	Well suited		Poorly suited Slope	0.75
Scaler-----	15	Well suited		Poorly suited Slope	0.75
207: Seddow-----	75	Well suited		Poorly suited Slope	0.75
208: Seddow-----	85	Well suited		Unsuited Slope	1.00
209: Seddow-----	80	Well suited		Moderately suited Slope	0.50
210: Setters-----	80	Well suited		Moderately suited Slope	0.50
211: Shattuck-----	90	Well suited		Poorly suited Slope	0.75
212: Shattuck-----	90	Moderately suited Slope	0.50	Unsuited Slope	1.00
213: Shattuck, moist-----	90	Moderately suited Slope	0.50	Unsuited Slope	1.00
214: Shattuck, moist-----	50	Well suited		Poorly suited Slope	0.75
Dworshak, moist-----	40	Well suited		Poorly suited Slope	0.75
215: Shattuck-----	60	Well suited		Poorly suited Slope	0.75
Dworshak-----	35	Well suited		Poorly suited Slope	0.75
216: Sly-----	80	Well suited		Moderately suited Slope	0.50
Wilkins-----	15	Well suited		Well suited	
217: Southwick-----	85	Well suited		Moderately suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
218: Southwick-----	45	Well suited		Poorly suited Slope	0.75
Larkin-----	40	Well suited		Poorly suited Slope	0.75
219: Statemeadow-----	65	Well suited		Moderately suited Slope	0.50
Reggear-----	25	Well suited		Moderately suited Slope	0.50
220: Swayne-----	85	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50
221: Taney-----	80	Well suited		Moderately suited Slope	0.50
222: Taney-----	50	Well suited		Moderately suited Slope	0.50
Joel-----	35	Well suited		Moderately suited Slope	0.50
223: Taney-----	65	Well suited		Poorly suited Slope	0.75
McCrosket-----	25	Well suited		Poorly suited Slope Rock fragments	0.75 0.50
224: Taney-----	55	Well suited		Moderately suited Slope	0.50
Setters-----	35	Well suited		Moderately suited Slope	0.50
225: Taney-----	40	Well suited		Moderately suited Slope	0.50
Setters-----	40	Well suited		Moderately suited Slope	0.50
226: Teakean-----	80	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Unsuited Slope Stickiness; high plasticity index	1.00 0.50



# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Value	Suitability for mechanical planting	Value
		Rating class and limiting features		Rating class and limiting features	
227: Teneb-----	85	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Stickiness; high plasticity index	0.50
228: Texascreek-----	55	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
Rock outcrop-----	25	Not rated		Not rated	
229: Texascreek, dry-----	45	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
Whiskeycreek-----	35	Moderately suited Slope	0.50	Unsuited Slope Rock fragments	1.00 0.50
230: Norwidge-----	45	Well suited		Moderately suited Slope	0.50
Threebear-----	45	Well suited		Moderately suited Slope	0.50
231: Tomodo-----	80	Well suited		Unsuited Slope	1.00
232: Tomodo-----	60	Well suited		Poorly suited Slope	0.75
Lado-----	15	Well suited		Poorly suited Slope	0.75
233: Township-----	55	Well suited		Poorly suited Slope	0.75
Rettig-----	25	Well suited		Poorly suited Slope	0.75
234: Township-----	65	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rettig-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00
235: Township, dry-----	45	Moderately suited Slope	0.50	Unsuited Slope	1.00
Rettig, low precipitation-----	25	Moderately suited Slope	0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting	Suitability for mechanical planting		
		Rating class and limiting features	Value	Rating class and limiting features	Value
235: Nakarna, dry-----	20	Moderately suited Slope	0.50	Unsuited Slope	1.00
236: Trappercreek-----	50	Well suited		Moderately suited Slope	0.50
Narnett-----	35	Well suited		Moderately suited Slope	0.50
237: Uvi-----	65	Moderately suited Slope	0.50	Unsuited Slope	1.00
238: Uvi-----	90	Moderately suited Slope	0.50	Unsuited Slope	1.00
239: Vaywood, high precipitation-----	60	Well suited		Poorly suited Slope	0.75
Vaywood, dry-----	30	Well suited		Poorly suited Slope	0.75
240: Vaywood-----	85	Moderately suited Slope	0.50	Unsuited Slope	1.00
241: Vaywood-----	65	Well suited		Poorly suited Slope	0.75
Handoff-----	20	Well suited		Poorly suited Slope	0.75
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Moderately suited Stickiness; high plasticity index	0.50	Moderately suited Rock fragments Stickiness; high plasticity index Slope	0.50 0.50 0.50
244: Wellsbench-----	50	Moderately suited Slope Stickiness; high plasticity index	0.50 0.50	Unsuited Slope Rock fragments Stickiness; high plasticity index	1.00 0.50 0.50
Lacy-----	30	Moderately suited Rock fragments Slope Stickiness; high plasticity index	0.50 0.50 0.50	Unsuited Rock fragments Slope Stickiness; high plasticity index	1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 15.—Forestland Planting—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting	
		Rating class and limiting features	Value	Rating class and limiting features	Value
245: Wilkins-----	85	Well suited		Well suited	

# Soil Survey of Clearwater Area, Idaho

**Table 16.**—Forestland Site Preparation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)	Value	Suitability for mechanical site preparation (deep)	Value
		Rating class and limiting features		Rating class and limiting features	
1: Agatha, very rocky--	70	Poorly suited Slope	1.00	Unsuited Slope Rock fragments	1.00 0.50
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Poorly suited Slope	0.50	Poorly suited Slope Rock fragments	0.50 0.50
3: Agatha-----	75	Poorly suited Slope	1.00	Unsuited Slope Rock fragments	1.00 0.50
4: Ahsahka-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Fordcreek-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
5: Ahsahka-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Whiskeycreek-----	30	Poorly suited Slope	1.00	Unsuited Slope Restrictive layer	1.00 1.00
6: Aldermand-----	85	Poorly suited Slope	1.00	Unsuited Slope	1.00
7: Aldermand-----	90	Poorly suited Slope	1.00	Unsuited Slope	1.00
8: Aldermand, dry-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
9: Aquandic Cryaquepts	90	Well suited		Unsuited Wetness	1.00
10: Aquandic Endoaquepts	60	Well suited		Unsuited Wetness	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
10: Aquandic Dystrudepts	20	Poorly suited Rock fragments	0.50	Unsuited Wetness	1.00
11: Bandmill, dry-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grangemont-----	30	Well suited		Well suited	
Bargamin-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
12: Bandmill-----	40	Well suited		Well suited	
Riswold-----	30	Well suited		Well suited	
13: Berthahill, moist---	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Handoff-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
14: Berthahill-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00
Handoff-----	20	Poorly suited Slope	1.00	Unsuited Slope	1.00
15: Berthahill-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Shattuck-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
16: Bigtalk, cool-----	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Bigtalk, wet-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
17: Bigtalk-----	80	Poorly suited Slope	1.00	Unsuited Slope	1.00
18: Bigtalk, cool-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Floodwood, cool----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
19: Bigtalk, cool-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
19: Keeler, cool-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
20: Boulder creek, moist	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
21: Boulder creek-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
22: Boulder creek-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
23: Boulder creek, moist	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
Brodeer-----	15	Poorly suited Slope	1.00	Unsuited Slope	1.00
24: Boulder creek-----	65	Poorly suited Slope	1.00	Unsuited Slope	1.00
Brodeer-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
25: Boulder creek-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Judgetown-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
26: Boulder creek, high precipitation-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Marble creek-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
27: Boulder creek, cool, dry-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rettig, cool-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
28: Brequito, dry-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
29: Brequito-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
29: Grangemont-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
30: Brequito-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lado, dry-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
31: Brequito-----	60	Well suited		Well suited	
Lado, dry-----	25	Well suited		Well suited	
32: Brequito-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Mushel-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
33: Brequito-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Mushel-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
34: Brodeer, dry-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Brodeer-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
35: Brodeer-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Mushel-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
36: Brodeer, warm-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Mushel, dry-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
37: Brodeer-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Boulder creek-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
38: Brodeer-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Flewsie, dry-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
39: Brodeer-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lostpete-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
40: Brodeer, moist-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lostpete, moist-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
41: Brodeer, dry-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Mushel-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
42: Brodeer-----	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Mushel-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
43: Burntcreek-----	80	Well suited		Unsuited Wetness	1.00
44: Campra-----	80	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
45: Campra-----	45	Poorly suited Rock fragments Slope	0.50 0.50	Poorly suited Slope	0.50
Sly-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
46: Carlinton-----	80	Poorly suited Slope	0.50	Poorly suited Slope	0.50
47: Carlinton-----	85	Well suited		Well suited	



# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
48: Carlinton-----	50	Well suited		Well suited	
Kruse-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
49: Carlinton-----	55	Well suited		Well suited	
Seddow-----	35	Well suited		Well suited	
50: Caseycreek-----	80	Well suited		Well suited	
51: Cavendish-----	75	Well suited		Well suited	
52: Cavendish-----	45	Well suited		Well suited	
Taney-----	40	Well suited		Well suited	
53: Cobbler-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Aldermant-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
54: Cobbler-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Noil-----	45	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
55: Cranberry-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Riswold-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
56: Crumarine-----	95	Well suited		Unsuited Wetness	1.00
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Well suited		Well suited	
59: Driscoll-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Larkin-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
60: Dullaxe, high elevation-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Dullaxe-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
61: Dullaxe, dry-----	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Dullaxe, wet-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
62: Dullaxe-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Brodeer-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
63: Dullaxe-----	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Brodeer-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
64: Dullaxe-----	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Judgetown-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
65: Dullaxe-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00
Judgetown, moist---	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
66: Dullaxe-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Jury, moist-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
67: Dumps, wood slash---	100	Not rated		Not rated	
68: Dworshak-----	85	Poorly suited Slope	1.00	Unsuited Slope	1.00
69: Dworshak-----	80	Poorly suited Slope	0.50	Poorly suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
69: Brequito-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
70: Elkberry-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Elkberry, wet-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
71: Elkberry-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Dworshak-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
72: Elkridge-----	55	Poorly suited Slope Rock fragments	0.50 0.50	Poorly suited Slope	0.50
Riswold-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
73: Elkridge-----	65	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Riswold-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
74: Fico, dry-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Hucberit, warm-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
75: Fico-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Weitas-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
76: Flewsie, high precipitation-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
77: Flewsie, low precipitation-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00
Flewsie, dry-----	20	Poorly suited Slope	1.00	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
78: Floodwood-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
79: Floodwood, warm-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Keeler-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
80: Floodwood-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Keeler, warm-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
81: Floodwood-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Keeler, warm-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
82: Flumecreek-----	85	Poorly suited Slope	1.00	Unsuited Slope Rock fragments	1.00 0.50
83: Flumecreek-----	65	Poorly suited Slope	0.50	Poorly suited Slope Rock fragments	0.50 0.50
Stepoff-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Dworshak, dry-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
84: Fordcreek-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00
85: Fordcreek-----	80	Well suited		Well suited	
86: Garveson, high precipitation-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Floodwood-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
87: Gramil-----	60	Well suited		Well suited	

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
87: Lewhand-----	30	Well suited		Unsuited Wetness	1.00
88: Gramil-----	50	Well suited		Well suited	
Reggear-----	40	Well suited		Well suited	
89: Grandad-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
90: Grandad, dry-----	70	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grandad-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
91: Grandad, dry-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00
Grandad-----	20	Poorly suited Slope	1.00	Unsuited Slope	1.00
92: Grandad-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Rettig-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
93: Grandad, wet-----	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rettig, wet-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
94: Grandad, dry-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Scand-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
95: Grangemont-----	60	Well suited		Well suited	
Kauder-----	35	Well suited		Well suited	
96: Grangemont, dry-----	50	Well suited		Well suited	
Kauder, dry-----	40	Well suited		Well suited	

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97: Grangemont-----	60	Well suited		Well suited	
Kauder, moist-----	30	Well suited		Well suited	
98: Grangemont, wet-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Riswold-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
99: Grasshopper-----	80	Well suited		Unsuited Wetness	1.00
100: Gwin-----	45	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
Kettenbach-----	40	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
101: Gwin-----	45	Poorly suited Slope Rock fragments	0.50 0.50	Unsuited Restrictive layer Slope	1.00 0.50
Kettenbach-----	30	Poorly suited Slope Rock fragments	0.50 0.50	Poorly suited Slope	0.50
Keuterville-----	20	Poorly suited Slope Rock fragments	0.50 0.50	Poorly suited Slope	0.50
102: Hildebrand-----	55	Well suited		Well suited	
Spacecreek, dry-----	35	Well suited		Well suited	
103: Hubub, wet-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
104: Hubub, wet-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Dworshak-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
105: Hubub-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lostpete-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
106: Hucberit-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
107: Hucberit-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
Vaywood, high precipitation-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
108: Hugus-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
109: Hugus-----	90	Poorly suited Slope	1.00	Unsuited Slope	1.00
110: Hugus, moist-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
111: Hugus, high precipitation-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
112: Hugus, moist-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
Hugus-----	15	Poorly suited Slope	1.00	Unsuited Slope	1.00
113: Hugus-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Dworshak-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
114: Itzee-----	90	Well suited		Well suited	
115: Jacket-----	80	Poorly suited Slope	0.50	Poorly suited Slope	0.50
116: Jacket-----	85	Well suited		Well suited	
117: Jacket-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
117: Wellsbench-----	35	Poorly suited Slope Stickiness; high plasticity index	0.50 0.50	Poorly suited Slope	0.50
118: Jacot-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Garveson-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
119: Jacot-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Garveson-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
120: Jaype-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Revling-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
121: Jaype, dry-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Revling, dry-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
122: Jaype-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Statemeadow-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
123: Joel-----	50	Well suited		Well suited	
Setters-----	30	Well suited		Well suited	
124: Johnson-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
125: Johnson-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Swayne-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
126: Johnson-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00



# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
126: Swayne-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
127: Johnson-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Texascreek-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
128: Jury-----	80	Poorly suited Slope	0.50	Poorly suited Slope	0.50
129: Jury-----	85	Poorly suited Slope	1.00	Unsuited Slope	1.00
130: Jury, cold-----	90	Poorly suited Slope	1.00	Unsuited Slope	1.00
131: Jury-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Weitas-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
132: Jury-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Weitas-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
133: Kauder-----	80	Well suited		Well suited	
134: Keeler, dry-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Keeler-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
135: Keeler, moist-----	65	Poorly suited Slope	1.00	Unsuited Slope	1.00
Keeler-----	20	Poorly suited Slope	1.00	Unsuited Slope	1.00
136: Keeler-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Aldermant-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
137: Keeler-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Jacot-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
138: Keeler-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lado-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
139: Kettenbach-----	40	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Gwin-----	35	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope Restrictive layer	1.00 1.00
Rock outcrop-----	15	Not rated		Not rated	
140: Kettenbach-----	45	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Keuterville-----	30	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
141: Keuterville-----	80	Poorly suited Slope Rock fragments	0.50 0.50	Poorly suited Slope	0.50
142: Keuterville-----	65	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
143: Keuterville-----	65	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated	
144: Klickson-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
145: Klickson-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
146: Klickson-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Agatha-----	35	Poorly suited Slope	1.00	Unsuited Slope Rock fragments	1.00 0.50
147: Klickson-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Kettenbach-----	30	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
148: Klickson-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated	
Kettenbach-----	15	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
149: Konkol-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Revling-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
150: Kooskia-----	80	Poorly suited Slope	0.50	Poorly suited Slope	0.50
151: Kooskia-----	80	Well suited		Well suited	
152: Kruse-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
153: Kruse-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
154: Kruse-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Aldermand-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
155: Kruse-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features
155: Aldermant-----	35	Poorly suited Slope	1.00	Unsuited Slope
156: Kruse-----	55	Poorly suited Slope	1.00	Unsuited Slope
McCrosket, dry-----	40	Poorly suited Slope	1.00	Unsuited Slope Rock fragments
157: Kruse-----	70	Poorly suited Slope	0.50	Poorly suited Slope
Noil-----	20	Poorly suited Slope Rock fragments	0.50 0.50	Poorly suited Slope
158: Kruse-----	45	Poorly suited Slope	0.50	Poorly suited Slope
Teakean-----	40	Poorly suited Slope	0.50	Poorly suited Slope
159: Larkin-----	50	Poorly suited Slope	1.00	Unsuited Slope
Driscoll-----	35	Poorly suited Slope	0.50	Poorly suited Slope
160: Lebaron-----	45	Well suited		Well suited
Latahco-----	40	Well suited		Well suited
161: Lewhand-----	65	Well suited		Unsuited Wetness
Burntcreek-----	20	Well suited		Unsuited Wetness
162: Lewhand-----	80	Well suited		Unsuited Wetness
Teneb-----	15	Well suited		Unsuited Wetness
163: Longbar-----	55	Poorly suited Slope	0.50	Poorly suited Slope
Bigtalk-----	35	Poorly suited Slope	0.50	Poorly suited Slope

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
164: Longbar-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Bigtalk-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
165: Longpen-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
166: Longpen-----	60	Well suited		Well suited	
167: Meland-----	50	Well suited		Poorly suited Restrictive layer	0.50
Jacket-----	40	Well suited		Well suited	
168: Meland-----	55	Poorly suited Slope	0.50	Poorly suited Slope Restrictive layer	0.50 0.50
Keuterville-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
169: Mushel-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Brodeer-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
170: Mushel-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Dullaxe-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
171: Nakarna, high precipitation-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
172: Nakarna, high precipitation-----	75	Poorly suited Slope	1.00	Unsuited Slope	1.00
173: Nakarna-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Nakarna, warm-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
174: Narnett-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Jury-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
175: Neva-----	80	Poorly suited Slope	1.00	Unsuited Slope	1.00
176: Newlig-----	85	Well suited		Well suited	
177: Noil-----	45	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Keeler-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
178: Noil-----	70	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Slope	1.00
Bouldercreek, warm--	15	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rock outcrop-----	15	Not rated		Not rated	
179: Norwidge, moist-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Threebear, moist----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
180: Odonnell-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grandad-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
181: Odonnell-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Well suited		Well suited	
Itzee-----	15	Well suited		Well suited	
183: Pits, quarry-----	100	Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
184: Placer-----	40	Poorly suited Slope	0.50	Poorly suited Slope Rock fragments	0.50 0.50
Dowper-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grangemont-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
185: Poorman, dry-----	70	Poorly suited Slope	1.00	Unsuited Slope	1.00
186: Poorman, dry-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Poorman-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
187: Poorman-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grandad-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
188: Poorman-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Grandad-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
189: Poorman-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grandad, dry-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
190: Poorman-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
Grandad, dry-----	35	Poorly suited Slope	1.00	Unsuited Slope	1.00
191: Reggear-----	55	Well suited		Well suited	
Kauder-----	25	Well suited		Well suited	
192: Reggear-----	50	Well suited		Well suited	
Seddow-----	30	Well suited		Well suited	

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
193: Rettig, high elevation-----	80	Poorly suited Slope	1.00	Unsuited Slope	1.00
194: Rettig-----	80	Poorly suited Slope	0.50	Poorly suited Slope	0.50
195: Rettig, cold-----	90	Poorly suited Slope	0.50	Poorly suited Slope	0.50
196: Rettig, cool-----	50	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rettig, dry-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
197: Rettig-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Grandad-----	30	Poorly suited Slope	1.00	Unsuited Slope	1.00
198: Rettig, warm, dry---	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Township-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
199: Rettig-----	40	Poorly suited Slope	1.00	Unsuited Slope	1.00
Township, wet-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
Stepoff-----	15	Poorly suited Slope	1.00	Unsuited Slope	1.00
200: Riswold-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Cranberry-----	45	Well suited		Well suited	
201: Riswold-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grangemont-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
202: Rock outcrop-----	35	Not rated		Not rated	



# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
202: Whiskeycreek-----	30	Poorly suited Slope	1.00	Unsuited Slope Restrictive layer	1.00
Texascreek, dry-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
203: Scaler-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
204: Scaler-----	60	Poorly suited Slope	1.00	Unsuited Slope	1.00
Grandad-----	20	Poorly suited Slope	1.00	Unsuited Slope	1.00
205: Scaler-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Grangemont-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
206: Scand-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Scaler-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
207: Seddow-----	75	Poorly suited Slope	0.50	Poorly suited Slope	0.50
208: Seddow-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
209: Seddow-----	80	Well suited		Well suited	
210: Setters-----	80	Well suited		Well suited	
211: Shattuck-----	90	Poorly suited Slope	0.50	Poorly suited Slope	0.50
212: Shattuck-----	90	Poorly suited Slope	1.00	Unsuited Slope	1.00
213: Shattuck, moist-----	90	Poorly suited Slope	1.00	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
214:					
Shattuck, moist-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Dworshak, moist-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
215:					
Shattuck-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Dworshak-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
216:					
Sly-----	80	Well suited		Well suited	
Wilkins-----	15	Well suited		Well suited	
217:					
Southwick-----	85	Well suited		Well suited	
218:					
Southwick-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Larkin-----	40	Poorly suited Slope	0.50	Poorly suited Slope	0.50
219:					
Statemeadow-----	65	Well suited		Well suited	
Reggear-----	25	Well suited		Well suited	
220:					
Swayne-----	85	Poorly suited Slope	0.50	Poorly suited Slope	0.50
221:					
Taney-----	80	Well suited		Well suited	
222:					
Taney-----	50	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Joel-----	35	Poorly suited Slope	0.50	Poorly suited Slope	0.50
223:					
Taney-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
McCrosket-----	25	Poorly suited Slope	0.50	Poorly suited Slope Rock fragments	0.50 0.50
224:					
Taney-----	55	Well suited		Well suited	
Setters-----	35	Well suited		Well suited	

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
225: Taney-----	40	Well suited		Well suited	
Setters-----	40	Well suited		Well suited	
226: Teakean-----	80	Poorly suited Slope	1.00	Unsuited Slope	1.00
227: Teneb-----	85	Well suited		Unsuited Wetness	1.00
228: Texascreek-----	55	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rock outcrop-----	25	Not rated		Not rated	
229: Texascreek, dry-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Whiskeycreek-----	35	Poorly suited Slope	1.00	Unsuited Slope Restrictive layer	1.00
230: Norwidge-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Threebear-----	45	Poorly suited Slope	0.50	Poorly suited Slope	0.50
231: Tomodo-----	80	Poorly suited Slope	0.50	Poorly suited Slope	0.50
232: Tomodo-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Lado-----	15	Poorly suited Slope	0.50	Poorly suited Slope	0.50
233: Township-----	55	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Rettig-----	25	Poorly suited Slope	0.50	Poorly suited Slope	0.50
234: Township-----	65	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rettig-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
235: Township, dry-----	45	Poorly suited Slope	1.00	Unsuited Slope	1.00
Rettig, low precipitation-----	25	Poorly suited Slope	1.00	Unsuited Slope	1.00
Nakarna, dry-----	20	Poorly suited Slope	1.00	Unsuited Slope	1.00
236: Trapper Creek-----	50	Well suited		Well suited	
Narnett-----	35	Well suited		Well suited	
237: Uvi-----	65	Poorly suited Slope	1.00	Unsuited Slope	1.00
238: Uvi-----	90	Poorly suited Slope	1.00	Unsuited Slope	1.00
239: Vaywood, high precipitation-----	60	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Vaywood, dry-----	30	Poorly suited Slope	0.50	Poorly suited Slope	0.50
240: Vaywood-----	85	Poorly suited Slope	1.00	Unsuited Slope	1.00
241: Vaywood-----	65	Poorly suited Slope	0.50	Poorly suited Slope	0.50
Handoff-----	20	Poorly suited Slope	0.50	Poorly suited Slope	0.50
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Poorly suited Stickiness; high plasticity index	0.50	Well suited	
244: Wellsbench-----	50	Poorly suited Slope Stickiness; high plasticity index	1.00 0.50	Unsuited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 16.—Forestland Site Preparation—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
244: Lacy-----	30	Poorly suited Slope Rock fragments	1.00 0.50	Unsuited Restrictive layer Slope Rock fragments	1.00 1.00 0.50
245: Wilkins-----	85	Well suited		Well suited	

# Soil Survey of Clearwater Area, Idaho

**Table 17.**—Damage by Fire and Seedling Mortality on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire	Potential for seedling mortality		
		Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Low Texture/surface depth/rock fragments	0.10	Low	
3: Agatha-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
4: Ahsahka-----	45	Low		High Available water	1.00
Fordcreek-----	40	Low		High Available water	1.00
5: Ahsahka-----	50	Low		High Available water	1.00
Whiskeycreek-----	30	High Texture/slope/ surface depth	1.00	High Available water	1.00
6: Aldermand-----	85	Low Texture/slope/rock fragments	0.10	Low	
7: Aldermand-----	90	Low Texture/slope/rock fragments	0.10	Low	
8: Aldermand, dry-----	75	Low		Moderate Available water	0.50
9: Aquandic Cryaquepts	90	Low Texture/rock fragments	0.10	High Wetness	1.00

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
10: Aquandic Endoaquepts	60	Low Texture/rock fragments	0.10	High Wetness	1.00
Aquandic Dystrudepts	20	Low Texture/rock fragments	0.10	High Wetness	1.00
11: Bandmill, dry-----	40	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
Grangemont-----	30	Moderate Texture/surface depth/rock fragments	0.50	Low	
Bargamin-----	25	Moderate Texture/surface depth/rock fragments	0.50	Low	
12: Bandmill-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
Riswold-----	30	Low Texture/rock fragments	0.10	Low	
13: Berthahill, moist---	75	Low Texture/rock fragments	0.10	Low	
Handoff-----	15	Low Texture/rock fragments	0.10	Low	
14: Berthahill-----	70	Low Texture/slope/rock fragments	0.10	Low	
Handoff-----	20	Low Texture/rock fragments	0.10	Low	
15: Berthahill-----	65	Low Texture/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
15: Shattuck-----	15	Low Texture/rock fragments	0.10	Low	
16: Bigtalk, cool-----	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Bigtalk, wet-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
17: Bigtalk-----	80	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
18: Bigtalk, cool-----	50	Low Texture/surface depth/rock fragments	0.10	Low	
Floodwood, cool-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
19: Bigtalk, cool-----	75	Low Texture/surface depth/rock fragments	0.10	Low	
Keeler, cool-----	20	Low Texture/surface depth/rock fragments	0.10	Low	
20: Bouldercreek, moist	85	Low Texture/rock fragments	0.10	Low	
21: Bouldercreek-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
22: Bouldercreek-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	



# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
23: Bouldercreek, moist	75	Low Texture/slope/rock fragments	0.10	Low	
Brodeer-----	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
24: Bouldercreek-----	65	Low Texture/slope/rock fragments	0.10	Low	
Brodeer-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
25: Bouldercreek-----	55	Low Texture/slope/rock fragments	0.10	Low	
Judgetown-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
26: Bouldercreek, high precipitation-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Marblecreek-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
27: Bouldercreek, cool, dry-----	70	Low Texture/slope/rock fragments	0.10	Low	
Rettig, cool-----	25	Low Texture/slope/rock fragments	0.10	Low	
28: Brequito, dry-----	65	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
29: Brequito-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Grangemont-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
30: Brequito-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Lado, dry-----	35	Low Texture/surface depth/rock fragments	0.10	Low	
31: Brequito-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
Lado, dry-----	25	Low Texture/surface depth/rock fragments	0.10	Low	
32: Brequito-----	50	Low Texture/surface depth/rock fragments	0.10	Low	
Mushel-----	35	Low Texture/surface depth/rock fragments	0.10	Low	
33: Brequito-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Mushel-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
34: Brodeer, dry-----	55	Low Texture/surface depth/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
34: Brodeer-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
35: Brodeer-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Mushel-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
36: Brodeer, warm-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Mushel, dry-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
37: Brodeer-----	65	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Bouldercreek-----	25	Low Texture/rock fragments	0.10	Low	
38: Brodeer-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Flewsie, dry-----	40	Low Texture/slope/rock fragments	0.10	Low	
39: Brodeer-----	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Lostpete-----	35	Low Texture/surface depth/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
40: Brodeer, moist-----	55	Low Texture/surface depth/rock fragments	0.10	Low	
Lostpete, moist-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
41: Brodeer, dry-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Mushel-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
42: Brodeer-----	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Mushel-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
43: Burntcreek-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00
44: Campra-----	80	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
45: Campra-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Sly-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
46: Carlinton-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
47: Carlinton-----	85	Low Texture/rock fragments	0.10	High Wetness	1.00
48: Carlinton-----	50	Low Texture/rock fragments	0.10	High Wetness	1.00
Kruse-----	35	Moderate Texture/rock fragments	0.50	Low	
49: Carlinton-----	55	Low Texture/rock fragments	0.10	High Wetness	1.00
Seddow-----	35	Low Texture/surface depth/rock fragments	0.10	Low	
50: Caseycreek-----	80	Low Texture/surface depth/rock fragments	0.10	Low	
51: Cavendish-----	75	Low Texture/rock fragments	0.10	Low	
52: Cavendish-----	45	Low Texture/rock fragments	0.10	Low	
Taney-----	40	Low Texture/rock fragments	0.10	High Wetness	1.00
53: Cobbler-----	55	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Aldermand-----	35	Low Texture/slope/rock fragments	0.10	Low	
54: Cobbler-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54: Noil-----	45	Low Texture/slope/rock fragments	0.10	Low	
55: Cranberry-----	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Riswold-----	20	Low Texture/slope/rock fragments	0.10	Low	
56: Crumarine-----	95	Low Texture/surface depth/rock fragments	0.10	High Wetness Available water	1.00 0.50
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Low Texture/rock fragments	0.10	Low	
59: Driscoll-----	45	Low Texture/rock fragments	0.10	Low	
Larkin-----	35	Low Texture/rock fragments	0.10	Low	
60: Dullaxe, high elevation-----	45	Low Texture/slope/rock fragments	0.10	Low	
Dullaxe-----	35	Low Texture/slope/rock fragments	0.10	Low	
61: Dullaxe, dry-----	60	Low Texture/slope/rock fragments	0.10	Low	
Dullaxe, wet-----	35	Low Texture/slope/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
62: Dullaxe-----	50	Low Texture/rock fragments	0.10	Low	
Brodeer-----	35	Low Texture/surface depth/rock fragments	0.10	Low	
63: Dullaxe-----	60	Low Texture/slope/rock fragments	0.10	Low	
Brodeer-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
64: Dullaxe-----	60	Low Texture/slope/rock fragments	0.10	Low	
Judgetown-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
65: Dullaxe-----	70	Low Texture/slope/rock fragments	0.10	Low	
Judgetown, moist----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
66: Dullaxe-----	55	Low Texture/slope/rock fragments	0.10	Low	
Jury, moist-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
67: Dumps, wood slash---	100	Not rated		Not rated	
68: Dworshak-----	85	Low Texture/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
69: Dworshak-----	80	Low Texture/rock fragments	0.10	Low	
Brequito-----	15	Low Texture/surface depth/rock fragments	0.10	Low	
70: Elkberry-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Elkberry, wet-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
71: Elkberry-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Dworshak-----	40	Low Texture/rock fragments	0.10	Low	
72: Elkridge-----	55	Low Texture/slope/rock fragments	0.10	Low	
Riswold-----	40	Low Texture/slope/rock fragments	0.10	Low	
73: Elkridge-----	65	Low Texture/slope/rock fragments	0.10	Low	
Riswold-----	30	Low Texture/slope/rock fragments	0.10	Low	
74: Fico, dry-----	55	Low Texture/slope/rock fragments	0.10	Low	
Hucberit, warm-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	



# Soil Survey of Clearwater Area, Idaho

Table 17.-Damage by Fire and Seedling Mortality on Forestland--Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
75: Fico-----	50	Low Texture/slope/rock fragments	0.10	Low	
Weitas-----	40	Low Texture/rock fragments	0.10	Low	
76: Flewsie, high precipitation-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
77: Flewsie, low precipitation-----	70	Low Texture/slope/rock fragments	0.10	Low	
Flewsie, dry-----	20	Low Texture/slope/rock fragments	0.10	Low	
78: Floodwood-----	75	Low		Moderate Available water	0.50
79: Floodwood, warm-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Keeler-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
80: Floodwood-----	50	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Keeler, warm-----	30	Low Texture/rock fragments	0.10	Moderate Available water	0.50
81: Floodwood-----	50	Low Texture/slope/rock fragments	0.10	Low	
Keeler, warm-----	30	Low		Moderate Available water	0.50

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
82: Flumecreek-----	85	Low Texture/slope/rock fragments	0.10	Low	
83: Flumecreek-----	65	Low Texture/rock fragments	0.10	Low	
Stepoff-----	20	Low Texture/rock fragments	0.10	Moderate Soil reaction	0.50
Dworshak, dry-----	15	Low Texture/rock fragments	0.10	Low	
84: Fordcreek-----	70	Low Texture/slope/rock fragments	0.10	Low	
85: Fordcreek-----	80	Low Texture/rock fragments	0.10	Moderate Available water	0.50
86: Garveson, high precipitation-----	55	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Floodwood-----	30	Low		Moderate Available water	0.50
87: Gramil-----	60	Low Texture/rock fragments	0.10	High Wetness	1.00
Lewhand-----	30	Low Texture/rock fragments	0.10	High Wetness	1.00
88: Gramil-----	50	Low Texture/rock fragments	0.10	High Wetness	1.00
Reggear-----	40	Low Texture/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
89: Grandad-----	85	Low Texture/surface depth/rock fragments	0.10	Low	
90: Grandad, dry-----	70	Low Texture/surface depth/rock fragments	0.10	Low	
Grandad-----	20	Low Texture/surface depth/rock fragments	0.10	Low	
91: Grandad, dry-----	70	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Grandad-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
92: Grandad-----	55	Low Texture/surface depth/rock fragments	0.10	Low	
Rettig-----	40	Low Texture/rock fragments	0.10	Low	
93: Grandad, wet-----	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Rettig, wet-----	35	Low Texture/slope/rock fragments	0.10	Low	
94: Grandad, dry-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Scand-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
95: Grangemont-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
Kauder-----	35	Low Texture/surface depth/rock fragments	0.10	Moderate Wetness	0.50
96: Grangemont, dry-----	50	Low Texture/surface depth/rock fragments	0.10	Low	
Kauder, dry-----	40	Low Texture/surface depth/rock fragments	0.10	Moderate Wetness	0.50
97: Grangemont-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
Kauder, moist-----	30	Low Texture/surface depth/rock fragments	0.10	Moderate Wetness	0.50
98: Grangemont, wet-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Riswold-----	35	Low Texture/slope/rock fragments	0.10	Low	
99: Grasshopper-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00
100: Gwin-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Kettenbach-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
101: Gwin-----	45	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
Kettenbach-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
Keuterville-----	20	Low Texture/rock fragments	0.10	Low	
102: Hildebrand-----	55	Low Texture/surface depth/rock fragments	0.10	Low	
Spacecreek, dry-----	35	Low Texture/rock fragments	0.10	Low	
103: Hubub, wet-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
104: Hubub, wet-----	65	Low Texture/surface depth/rock fragments	0.10	Low	
Dworshak-----	30	Low Texture/rock fragments	0.10	Low	
105: Hubub-----	65	Low Texture/surface depth/rock fragments	0.10	Low	
Lostpete-----	20	Low Texture/surface depth/rock fragments	0.10	Low	
106: Hucberit-----	85	Low Texture/surface depth/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
107: Hucberit-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Vaywood, high precipitation-----	35	Low Texture/slope/rock fragments	0.10	Low	
108: Hugus-----	85	Low Texture/surface depth/rock fragments	0.10	Low	
109: Hugus-----	90	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
110: Hugus, moist-----	75	Low Texture/surface depth/rock fragments	0.10	Low	
111: Hugus, high precipitation-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
112: Hugus, moist-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Hugus-----	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
113: Hugus-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
Dworshak-----	35	Low Texture/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
114: Itzee-----	90	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
115: Jacket-----	80	Low Texture/rock fragments	0.10	Low	
116: Jacket-----	85	Low Texture/rock fragments	0.10	Low	
117: Jacket-----	45	Low Texture/rock fragments	0.10	Low	
Wellsbench-----	35	Low Texture/rock fragments	0.10	Low	
118: Jacot-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Garveson-----	35	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
119: Jacot-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Garveson-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
120: Jaype-----	50	Low Texture/surface depth/rock fragments	0.10	Low	
Revling-----	35	Low Texture/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
121: Jaype, dry-----	65	Low Texture/surface depth/rock fragments	0.10	Low	
Revling, dry-----	15	Low Texture/rock fragments	0.10	Low	
122: Jaype-----	50	Low Texture/surface depth/rock fragments	0.10	Low	
Statemeadow-----	25	Low Texture/surface depth/rock fragments	0.10	Low	
123: Joel-----	50	Low Texture/rock fragments	0.10	Low	
Setters-----	30	Low Texture/rock fragments	0.10	High Wetness	1.00
124: Johnson-----	75	Low Texture/rock fragments	0.10	Low	
125: Johnson-----	55	Low Texture/rock fragments	0.10	Low	
Swayne-----	25	Low Texture/slope/rock fragments	0.10	Low	
126: Johnson-----	45	Low Texture/rock fragments	0.10	Low	
Swayne-----	40	Low Texture/slope/rock fragments	0.10	Low	
127: Johnson-----	50	Low Texture/rock fragments	0.10	Low	



# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
127: Texascreek-----	35	Low Texture/rock fragments	0.10	Low	
128: Jury-----	80	Low Texture/surface depth/rock fragments	0.10	Low	
129: Jury-----	85	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
130: Jury, cold-----	90	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
131: Jury-----	55	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Weitas-----	35	Low Texture/rock fragments	0.10	Low	
132: Jury-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
Weitas-----	30	Low Texture/rock fragments	0.10	Low	
133: Kauder-----	80	Low Texture/surface depth/rock fragments	0.10	Moderate Wetness	0.50
134: Keeler, dry-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Keeler-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
135: Keeler, moist-----	65	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Keeler-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
136: Keeler-----	55	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Aldermand-----	30	Low Texture/slope/rock fragments	0.10	Low	
137: Keeler-----	50	Low Texture/slope/rock fragments	0.10	Low	
Jacot-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
138: Keeler-----	55	Low Texture/surface depth/rock fragments	0.10	Low	
Lado-----	20	Low Texture/surface depth/rock fragments	0.10	Low	
139: Kettenbach-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Gwin-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Rock outcrop-----	15	Not rated		Not rated	
140: Kettenbach-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
140: Keuterville-----	30	Low Texture/rock fragments	0.10	Low	
141: Keuterville-----	80	Low Texture/rock fragments	0.10	Low	
142: Keuterville-----	65	Low Texture/rock fragments	0.10	Low	
143: Keuterville-----	65	Low Texture/rock fragments	0.10	High Available water	1.00
Rock outcrop-----	20	Not rated		Not rated	
144: Klickson-----	85	Low Texture/rock fragments	0.10	Low	
145: Klickson-----	70	Low Texture/rock fragments	0.10	Low	
146: Klickson-----	50	Low Texture/rock fragments	0.10	Low	
Agatha-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
147: Klickson-----	50	Low Texture/rock fragments	0.10	Low	
Kettenbach-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
148: Klickson-----	50	Low Texture/rock fragments	0.10	Low	
Rock outcrop-----	20	Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
148: Kettenbach-----	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
149: Konkol-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
Revling-----	25	Low Texture/rock fragments	0.10	Low	
150: Kooskia-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00
151: Kooskia-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00
152: Kruse-----	85	Moderate Texture/rock fragments	0.50	Low	
153: Kruse-----	75	Moderate Texture/slope/rock fragments	0.50	Low	
154: Kruse-----	50	Moderate Texture/slope/rock fragments	0.50	Low	
Aldermand-----	40	Low Texture/slope/rock fragments	0.10	Low	
155: Kruse-----	50	Moderate Texture/slope/rock fragments	0.50	Low	
Aldermand-----	35	Low Texture/slope/rock fragments	0.10	Low	
156: Kruse-----	55	Moderate Texture/slope/rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
156: McCrosket, dry-----	40	Low Texture/rock fragments	0.10	Low	
157: Kruse-----	70	Moderate Texture/rock fragments	0.50	Low	
Noil-----	20	Low Texture/rock fragments	0.10	Low	
158: Kruse-----	45	Moderate Texture/slope/rock fragments	0.50	Low	
Teakean-----	40	Low Texture/rock fragments	0.10	Low	
159: Larkin-----	50	Low Texture/rock fragments	0.10	Low	
Driscoll-----	35	Low Texture/rock fragments	0.10	Low	
160: Lebaron-----	45	Low Texture/rock fragments	0.10	High Wetness	1.00
Latahco-----	40	Low Texture/surface depth/rock fragments	0.10	High Wetness	1.00
161: Lewhand-----	65	Low Texture/rock fragments	0.10	High Wetness	1.00
Burntcreek-----	20	Low Texture/rock fragments	0.10	High Wetness	1.00
162: Lewhand-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00
Teneb-----	15	Low Texture/rock fragments	0.10	High Wetness	1.00

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
163: Longbar-----	55	Low Texture/surface depth/rock fragments	0.10	Low	
Bigtalk-----	35	Low Texture/surface depth/rock fragments	0.10	Low	
164: Longbar-----	55	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Bigtalk-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
165: Longpen-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
166: Longpen-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
167: Meland-----	50	Low Texture/rock fragments	0.10	Low	
Jacket-----	40	Low Texture/rock fragments	0.10	Low	
168: Meland-----	55	Low Texture/rock fragments	0.10	Low	
Keuterville-----	30	Low Texture/rock fragments	0.10	Low	
169: Mushel-----	60	Low Texture/surface depth/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
169: Brodeer-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
170: Mushel-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Dullaxe-----	45	Low Texture/slope/rock fragments	0.10	Low	
171: Nakarna, high precipitation-----	75	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
172: Nakarna, high precipitation-----	75	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
173: Nakarna-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Nakarna, warm-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
174: Narnett-----	60	Low Texture/rock fragments	0.10	Low	
Jury-----	20	Low Texture/surface depth/rock fragments	0.10	Low	
175: Neva-----	80	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
176: Newlig-----	85	Low Texture/surface depth/rock fragments	0.10	Low	
177: Noil-----	45	Low Texture/slope/rock fragments	0.10	Low	
Keeler-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
178: Noil-----	70	Low Texture/slope/rock fragments	0.10	Low	
Bouldercreek, warm--	15	Low Texture/slope/rock fragments	0.10	Low	
Rock outcrop-----	15	Not rated		Not rated	
179: Norwidge, moist-----	50	Low Texture/surface depth/rock fragments	0.10	Low	
Threebear, moist----	45	Low Texture/surface depth/rock fragments	0.10	Low	
180: Odonnell-----	65	Low Texture/surface depth/rock fragments	0.10	Low	
Grandad-----	15	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
181: Odonnell-----	75	Moderate Texture/surface depth/rock fragments	0.50	Moderate Wetness Available water	0.50 0.50



# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Low Texture/rock fragments	0.10	High Wetness Available water	1.00 0.50
Itzee-----	15	Low Texture/surface depth/rock fragments	0.10	Moderate Available water	0.50
183: Pits, quarry-----	100	Not rated		Not rated	
184: Placer-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
Dowper-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
Grangemont-----	15	Low Texture/surface depth/rock fragments	0.10	Low	
185: Poorman, dry-----	70	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
186: Poorman, dry-----	60	Low Texture/surface depth/rock fragments	0.10	Low	
Poorman-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
187: Poorman-----	55	Low Texture/surface depth/rock fragments	0.10	Low	
Grandad-----	35	Low Texture/surface depth/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
188: Poorman-----	50	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Grandad-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
189: Poorman-----	75	Low Texture/surface depth/rock fragments	0.10	Low	
Grandad, dry-----	20	Low Texture/surface depth/rock fragments	0.10	Low	
190: Poorman-----	40	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Grandad, dry-----	35	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
191: Reggear-----	55	Low Texture/rock fragments	0.10	Low	
Kauder-----	25	Low Texture/surface depth/rock fragments	0.10	Moderate Wetness	0.50
192: Reggear-----	50	Low Texture/rock fragments	0.10	Low	
Seddow-----	30	Low Texture/surface depth/rock fragments	0.10	Low	
193: Rettig, high elevation-----	80	Low Texture/slope/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
194: Rettig-----	80	Low Texture/rock fragments	0.10	Low	
195: Rettig, cold-----	90	Low Texture/rock fragments	0.10	Low	
196: Rettig, cool-----	50	Low Texture/slope/rock fragments	0.10	Low	
Rettig, dry-----	40	Low Texture/slope/rock fragments	0.10	Low	
197: Rettig-----	45	Low Texture/slope/rock fragments	0.10	Low	
Grandad-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
198: Rettig, warm, dry---	60	Low Texture/slope/rock fragments	0.10	Low	
Township-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
199: Rettig-----	40	Low Texture/slope/rock fragments	0.10	Low	
Township, wet-----	25	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Stepoff-----	15	Low Texture/slope/rock fragments	0.10	Moderate Soil reaction	0.50
200: Riswold-----	50	Low Texture/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
200: Cranberry-----	45	Low Texture/surface depth/rock fragments	0.10	Low	
201: Riswold-----	45	Low Texture/rock fragments	0.10	Low	
Grangemont-----	40	Low Texture/surface depth/rock fragments	0.10	Low	
202: Rock outcrop-----	35	Not rated		Not rated	
Whiskeycreek-----	30	High Texture/slope/ surface depth	1.00	High Available water	1.00
Texascreek, dry-----	25	Low Texture/rock fragments	0.10	High Available water	1.00
203: Scaler-----	85	Low Texture/surface depth/rock fragments	0.10	Low	
204: Scaler-----	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Grandad-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
205: Scaler-----	60	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Grangemont-----	30	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
206: Scand-----	65	Low Texture/surface depth/rock fragments	0.10	Low	

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
206: Scaler-----	15	Low Texture/surface depth/rock fragments	0.10	Low	
207: Seddow-----	75	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
208: Seddow-----	85	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
209: Seddow-----	80	Low Texture/surface depth/rock fragments	0.10	Low	
210: Setters-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00
211: Shattuck-----	90	Low Texture/rock fragments	0.10	Low	
212: Shattuck-----	90	Low		Moderate Available water	0.50
213: Shattuck, moist----	90	Low Texture/slope/rock fragments	0.10	Low	
214: Shattuck, moist----	50	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Dworshak, moist----	40	Low Texture/rock fragments	0.10	Moderate Available water	0.50
215: Shattuck-----	60	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Dworshak-----	35	Low Texture/rock fragments	0.10	Moderate Available water	0.50

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
216: Sly-----	80	Moderate Texture/surface depth/rock fragments	0.50	Low	
Wilkins-----	15	Low Texture/rock fragments	0.10	High Wetness	1.00
217: Southwick-----	85	Low Texture/rock fragments	0.10	High Wetness	1.00
218: Southwick-----	45	Low Texture/rock fragments	0.10	Moderate Available water	0.50
Larkin-----	40	Low Texture/rock fragments	0.10	Moderate Available water	0.50
219: Statemeadow-----	65	Moderate Texture/surface depth/rock fragments	0.50	Low	
Reggear-----	25	Low Texture/rock fragments	0.10	Low	
220: Swayne-----	85	Low Texture/rock fragments	0.10	Low	
221: Taney-----	80	Low Texture/rock fragments	0.10	High Wetness	1.00
222: Taney-----	50	Low Texture/rock fragments	0.10	Low	
Joel-----	35	Low Texture/rock fragments	0.10	Low	
223: Taney-----	65	Low Texture/rock fragments	0.10	High Wetness Available water	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
223: McCrosket-----	25	Low Texture/rock fragments	0.10	High Available water	1.00
224: Taney-----	55	Low Texture/rock fragments	0.10	High Wetness	1.00
Setters-----	35	Low Texture/rock fragments	0.10	High Wetness	1.00
225: Taney-----	40	Low Texture/rock fragments	0.10	High Wetness	1.00
Setters-----	40	Low Texture/rock fragments	0.10	High Wetness	1.00
226: Teakean-----	80	Low Texture/rock fragments	0.10	Moderate Available water	0.50
227: Teneb-----	85	Low Texture/rock fragments	0.10	High Wetness	1.00
228: Texascreek-----	55	Low Texture/rock fragments	0.10	High Available water	1.00
Rock outcrop-----	25	Not rated		Not rated	
229: Texascreek, dry-----	45	Low Texture/rock fragments	0.10	High Available water	1.00
Whiskeycreek-----	35	High Texture/slope/ surface depth	1.00	High Available water	1.00
230: Norwidge-----	45	Moderate Texture/surface depth/rock fragments	0.50	Low	
Threebear-----	45	Moderate Texture/surface depth/rock fragments	0.50	Moderate Wetness	0.50

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
231: Tomodo-----	80	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
232: Tomodo-----	60	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
Lado-----	15	Moderate Texture/surface depth/rock fragments	0.50	Moderate Available water	0.50
233: Township-----	55	Low Texture/surface depth/rock fragments	0.10	Low	
Rettig-----	25	Low Texture/rock fragments	0.10	Low	
234: Township-----	65	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
Rettig-----	25	Low Texture/slope/rock fragments	0.10	Low	
235: Township, dry-----	45	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
Rettig, low precipitation-----	25	Low		Moderate Available water	0.50
Nakarna, dry-----	20	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Moderate Available water	0.50
236: Trappercreek-----	50	Moderate Texture/surface depth/rock fragments	0.50	Low	



# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
236: Narnett-----	35	Low Texture/rock fragments	0.10	Low	
237: Uvi-----	65	Low Texture/slope/rock fragments	0.10	Low	
238: Uvi-----	90	Moderate Texture/slope/ surface depth/ rock fragments	0.50	Low	
239: Vaywood, high precipitation-----	60	Low Texture/rock fragments	0.10	Low	
Vaywood, dry-----	30	Low Texture/rock fragments	0.10	Low	
240: Vaywood-----	85	Low Texture/slope/rock fragments	0.10	Low	
241: Vaywood-----	65	Low Texture/rock fragments	0.10	Low	
Handoff-----	20	Low Texture/rock fragments	0.10	Low	
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Low Texture/rock fragments	0.10	Moderate Available water	0.50
244: Wellsbench-----	50	Low		High Available water	1.00
Lacy-----	30	Moderate Texture/slope/ surface depth/ rock fragments	0.50	High Available water	1.00

# Soil Survey of Clearwater Area, Idaho

Table 17.—Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire		Potential for seedling mortality	
		Rating class and limiting features	Value	Rating class and limiting features	Value
245: Wilkins-----	85	Low Texture/rock fragments	0.10	High Wetness	1.00

# Soil Survey of Clearwater Area, Idaho

**Table 18.**—Camp Areas, Picnic Areas, and Playgrounds

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
3: Agatha-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
4: Ahsahka-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Fordcreek-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
5: Ahsahka-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Whiskeycreek-----	30	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
6: Aldermant-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
7: Aldermant-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
8: Aldermant, dry-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
9: Aquandic Cryaquepts	90	Very limited Depth to saturated zone Flooding	1.00 1.00	Somewhat limited Depth to saturated zone Flooding	0.86 0.40	Very limited Depth to saturated zone Flooding	1.00 1.00
10: Aquandic Endoaquepts	60	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.26	Somewhat limited Depth to saturated zone Slow water movement	0.86 0.26	Very limited Depth to saturated zone Slow water movement Flooding	1.00 0.26 0.60

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10: Aquandic Dystrudepts	20	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.30	Very limited Depth to saturated zone Slow water movement	1.00 0.30	Very limited Depth to saturated zone Slope Slow water movement Flooding	1.00 0.12 0.30 0.60
11: Bandmill, dry-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grangemont-----	30	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Bargamin-----	25	Very limited Too steep Slow water movement	1.00 0.96	Very limited Too steep Slow water movement	1.00 0.96	Very limited Slope Slow water movement	1.00 0.96
12: Bandmill-----	40	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Riswold-----	30	Somewhat limited Slope Slow water movement	0.63 0.26	Somewhat limited Slope Slow water movement	0.63 0.26	Very limited Slope Slow water movement	1.00 0.26
13: Berthahill, moist---	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Handoff-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
14: Berthahill-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Handoff-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
15: Berthahill-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Shattuck-----	15	Very limited Too steep Slow water movement	1.00 0.21	Very limited Too steep Slow water movement	1.00 0.21	Very limited Slope Slow water movement	1.00 0.21
16: Bigtalk, cool-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Bigtalk, wet-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17: Bigtalk-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
18: Bigtalk, cool-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Floodwood, cool-----	40	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
19: Bigtalk, cool-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Keeler, cool-----	20	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
20: Bouldercreek, moist	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
21: Bouldercreek-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel	1.00 0.22
22: Bouldercreek-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel	1.00 0.22
23: Bouldercreek, moist	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
24: Bouldercreek-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
25: Bouldercreek-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Judgetown-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
26: Bouldercreek, high precipitation-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel	1.00 0.22
Marblecreek-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
27: Bouldercreek, cool, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig, cool-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
28: Brequito, dry-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
29: Brequito-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grangemont-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
30: Brequito-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lado, dry-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
31: Brequito-----	60	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Lado, dry-----	25	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
32: Brequito-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
33: Brequito-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
34: Brodeer, dry-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34: Brodeer-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
35: Brodeer-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
36: Brodeer, warm-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel, dry-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
37: Brodeer-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Bouldercreek-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
38: Brodeer-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Flewsie, dry-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
39: Brodeer-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lostpete-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
40: Brodeer, moist-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lostpete, moist-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
41: Brodeer, dry-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
42: Brodeer-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43: Burntcreek-----	80	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
44: Campra-----	80	Very limited Too steep Slow water movement	1.00 0.94	Very limited Too steep Slow water movement	1.00 0.94	Very limited Slope Slow water movement	1.00 0.94
45: Campra-----	45	Very limited Too steep Slow water movement	1.00 0.94	Very limited Too steep Slow water movement	1.00 0.94	Very limited Slope Slow water movement	1.00 0.94
Sly-----	40	Very limited Too steep Slow water movement	1.00 0.15	Very limited Too steep Slow water movement	1.00 0.15	Very limited Slope Slow water movement	1.00 0.15
46: Carlinton-----	80	Very limited Depth to saturated zone Too steep	1.00 1.00	Very limited Too steep Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Slope	1.00 1.00
47: Carlinton-----	85	Very limited Depth to saturated zone Slope	1.00 0.63	Very limited Depth to saturated zone Slope	1.00 0.63	Very limited Depth to saturated zone Slope	1.00 1.00
48: Carlinton-----	50	Very limited Depth to saturated zone Slope	1.00 0.16	Very limited Depth to saturated zone Slope	1.00 0.16	Very limited Depth to saturated zone Slope	1.00 1.00
Kruse-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
49: Carlinton-----	55	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Depth to saturated zone Slope	1.00 1.00
Seddow-----	35	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
50: Caseycreek-----	80	Somewhat limited Depth to saturated zone	0.07	Somewhat limited Depth to saturated zone	0.03	Somewhat limited Slope Depth to saturated zone	0.12 0.07



# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
51: Cavendish-----	75	Not limited		Not limited		Somewhat limited Slope	0.88
52: Cavendish-----	45	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
Taney-----	40	Very limited Depth to saturated zone Slope	1.00 0.96	Somewhat limited Slope Depth to saturated zone	0.96 0.88	Very limited Depth to saturated zone Slope	1.00 1.00
53: Cobbler-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Aldermand-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
54: Cobbler-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Noil-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
55: Cranberry-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Riswold-----	20	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
56: Crumarine-----	95	Very limited Depth to saturated zone Flooding	1.00 1.00	Somewhat limited Depth to saturated zone	0.90	Very limited Depth to saturated zone	1.00
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Somewhat limited Depth to saturated zone Slow water movement	0.95 0.41	Somewhat limited Depth to saturated zone Slow water movement	0.68 0.41	Very limited Slope Depth to saturated zone Slow water movement	1.00 0.95 0.41
59: Driscoll-----	45	Very limited Too steep Depth to saturated zone Slow water movement	1.00 0.95 0.41	Very limited Too steep Depth to saturated zone Slow water movement	1.00 0.68 0.41	Very limited Slope Depth to saturated zone Slow water movement	1.00 0.95 0.41

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
59: Larkin-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
60: Dullaxe, high elevation-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dullaxe-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
61: Dullaxe, dry-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dullaxe, wet-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
62: Dullaxe-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
63: Dullaxe-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
64: Dullaxe-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Judgetown-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
65: Dullaxe-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Judgetown, moist----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
66: Dullaxe-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Jury, moist-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
67: Dumps, wood slash---	100	Not rated		Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
68: Dworshak-----	85	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
69: Dworshak-----	80	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Brequito-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
70: Elkberry-----	45	Very limited Too steep Slow water movement	1.00 0.15	Very limited Too steep Slow water movement	1.00 0.15	Very limited Slope Slow water movement	1.00 0.15
Elkberry, wet-----	30	Very limited Too steep Slow water movement	1.00 0.15	Very limited Too steep Slow water movement	1.00 0.15	Very limited Slope Slow water movement	1.00 0.15
71: Elkberry-----	45	Very limited Too steep Slow water movement	1.00 0.15	Very limited Too steep Slow water movement	1.00 0.15	Very limited Slope Slow water movement	1.00 0.15
Dworshak-----	40	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
72: Elkridge-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Riswold-----	40	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
73: Elkridge-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Riswold-----	30	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
74: Fico, dry-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74: Hucberit, warm-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
75: Fico-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Weitas-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
76: Flewsie, high precipitation-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
77: Flewsie, low precipitation-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Flewsie, dry-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
78: Floodwood-----	75	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
79: Floodwood, warm-----	45	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Keeler-----	40	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
80: Floodwood-----	50	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Keeler, warm-----	30	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
81: Floodwood-----	50	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
81: Keeler, warm-----	30	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
82: Flumecreek-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
83: Flumecreek-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Stepoff-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dworshak, dry-----	15	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
84: Fordcreek-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
85: Fordcreek-----	80	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
86: Garveson, high precipitation-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Floodwood-----	30	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
87: Gramil-----	60	Very limited Depth to saturated zone Ponding Slow water movement	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Slow water movement Depth to saturated zone Ponding	1.00 1.00 1.00
Lewhand-----	30	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88: Gramil-----	50	Very limited Depth to saturated zone Ponding Slow water movement	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Slow water movement Depth to saturated zone Ponding Slope	1.00 1.00 1.00 1.00 0.12
Reggear-----	40	Somewhat limited Slow water movement Depth to saturated zone	0.26 0.56	Somewhat limited Slow water movement Depth to saturated zone	0.26 0.28	Somewhat limited Slope Slow water movement Depth to saturated zone	0.28 0.26 0.56
89: Grandad-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
90: Grandad, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
91: Grandad, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
92: Grandad-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
93: Grandad, wet-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig, wet-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
94: Grandad, dry-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Scand-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
95: Grangemont-----	60	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
95: Kauder-----	35	Somewhat limited Slope Depth to saturated zone	0.84 0.93	Somewhat limited Slope Depth to saturated zone	0.84 0.64	Very limited Slope Depth to saturated zone	1.00 0.93
96: Grangemont, dry-----	50	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Kauder, dry-----	40	Somewhat limited Slope Depth to saturated zone	0.84 0.93	Somewhat limited Slope Depth to saturated zone	0.84 0.64	Very limited Slope Depth to saturated zone	1.00 0.93
97: Grangemont-----	60	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Kauder, moist-----	30	Somewhat limited Slope Depth to saturated zone	0.84 0.93	Somewhat limited Slope Depth to saturated zone	0.84 0.64	Very limited Slope Depth to saturated zone	1.00 0.93
98: Grangemont, wet-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Riswold-----	35	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
99: Grasshopper-----	80	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.26	Somewhat limited Depth to saturated zone Slow water movement	0.86 0.26	Very limited Depth to saturated zone Slow water movement Flooding	1.00 0.26 0.60
100: Gwin-----	45	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel	1.00 1.00 0.35
Kettenbach-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel Depth to bedrock	1.00 1.00 0.06
101: Gwin-----	45	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel	1.00 1.00 0.35

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101: Kettenbach-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel Depth to bedrock	1.00 1.00 0.06
Keuterville-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
102: Hildebrand-----	55	Not limited		Not limited		Somewhat limited Slope	0.88
Spacecreek, dry-----	35	Not limited		Not limited		Somewhat limited Slope	0.88
103: Hubub, wet-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
104: Hubub, wet-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dworshak-----	30	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
105: Hubub-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lostpete-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
106: Hucberit-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
107: Hucberit-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Vaywood, high precipitation-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
108: Hugus-----	85	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
109: Hugus-----	90	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26



# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
110: Hugus, moist-----	75	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
111: Hugus, high precipitation-----	75	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
112: Hugus, moist-----	75	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Hugus-----	15	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
113: Hugus-----	60	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Dworshak-----	35	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
114: Itzee-----	90	Not limited		Not limited		Not limited	
115: Jacket-----	80	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
116: Jacket-----	85	Somewhat limited Slow water movement	0.41	Somewhat limited Slow water movement	0.41	Very limited Slope Slow water movement	1.00 0.41
117: Jacket-----	45	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
117: Wellsbench-----	35	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement Gravel	1.00 0.41 0.22
118: Jacot-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Garveson-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
119: Jacot-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Garveson-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
120: Jaype-----	50	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slow water movement Slope	1.00 1.00
Revling-----	35	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
121: Jaype, dry-----	65	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slow water movement Slope	1.00 1.00
Revling, dry-----	15	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
122: Jaype-----	50	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slow water movement Slope	1.00 1.00
Statemeadow-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
123: Joel-----	50	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
123: Setters-----	30	Very limited Depth to saturated zone Slope Slow water movement	1.00 0.84 0.41	Very limited Depth to saturated zone Slope Slow water movement	1.00 0.84 0.41	Very limited Depth to saturated zone Slope Slow water movement	1.00 1.00 0.41
124: Johnson-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
125: Johnson-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Swayne-----	25	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
126: Johnson-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Swayne-----	40	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
127: Johnson-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Texascreek-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Depth to bedrock	1.00 0.20
128: Jury-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
129: Jury-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
130: Jury, cold-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
131: Jury-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Weitas-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
132: Jury-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
132: Weitas-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
133: Kauder-----	80	Somewhat limited Slope Depth to saturated zone	0.84 0.93	Somewhat limited Slope Depth to saturated zone	0.84 0.64	Very limited Slope Depth to saturated zone	1.00 0.93
134: Keeler, dry-----	50	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Keeler-----	30	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
135: Keeler, moist-----	65	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Keeler-----	20	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
136: Keeler-----	55	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Aldermant-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
137: Keeler-----	50	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Jacot-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
138: Keeler-----	55	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Lado-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
139: Kettenbach-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel Depth to bedrock	1.00 1.00 0.06
Gwin-----	35	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock Gravel	1.00 1.00 0.35
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140: Kettenbach-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel Depth to bedrock	1.00 1.00 0.06
Keuterville-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
141: Keuterville-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
142: Keuterville-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
143: Keuterville-----	65	Very limited Too steep Gravel	1.00 0.59	Very limited Too steep Gravel	1.00 0.59	Very limited Slope Gravel	1.00 1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
144: Klickson-----	85	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
145: Klickson-----	70	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
146: Klickson-----	50	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
Agatha-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
147: Klickson-----	50	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
Kettenbach-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel Depth to bedrock	1.00 1.00 0.06
148: Klickson-----	50	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
Rock outcrop-----	20	Not rated		Not rated		Not rated	
Kettenbach-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel Depth to bedrock	1.00 1.00 0.06
149: Konkol-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Revling-----	25	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
150: Kooskia-----	80	Very limited Depth to saturated zone Too steep Dusty Slow water movement	1.00 1.00 0.50 0.41	Very limited Depth to saturated zone Too steep Dusty Slow water movement	1.00 1.00 0.50 0.41	Very limited Depth to saturated zone Slope Dusty Slow water movement	1.00 1.00 0.50 0.41
151: Kooskia-----	80	Very limited Depth to saturated zone Dusty Slow water movement	1.00 0.50 0.41	Very limited Depth to saturated zone Dusty Slow water movement	1.00 0.50 0.41	Very limited Depth to saturated zone Slope Dusty Slow water movement	1.00 1.00 0.50 0.41
152: Kruse-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
153: Kruse-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
154:							
Kruse-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Aldermant-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
155:							
Kruse-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Aldermant-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
156:							
Kruse-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
McCrosket, dry-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
157:							
Kruse-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Noil-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
158:							
Kruse-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Teakean-----	40	Very limited Too steep Depth to saturated zone Slow water movement	1.00 0.77 0.05	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.05 0.43	Very limited Slope Depth to saturated zone Slow water movement	1.00 0.77 0.05
159:							
Larkin-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Driscoll-----	35	Very limited Too steep Depth to saturated zone Slow water movement	1.00 0.95 0.41	Very limited Too steep Depth to saturated zone Slow water movement	1.00 0.68 0.41	Very limited Slope Depth to saturated zone Slow water movement	1.00 0.95 0.41
160:							
Lebaron-----	45	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.41	Very limited Depth to saturated zone Slow water movement	1.00 0.41	Very limited Depth to saturated zone Slow water movement	1.00 0.41

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
160: Latahco-----	40	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.21	Very limited Depth to saturated zone Slow water movement	1.00 1.00 0.21	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.21 0.60
161: Lewhand-----	65	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Burntcreek-----	20	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
162: Lewhand-----	80	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Teneb-----	15	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.26	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.26 0.40	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.26
163: Longbar-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Bigtalk-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
164: Longbar-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Bigtalk-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
165: Longpen-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
166: Longpen-----	60	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
167: Meland-----	50	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope Depth to bedrock	1.00 0.10



# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
167: Jacket-----	40	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
		Slow water movement	0.41	Slow water movement	0.41	Slow water movement	0.41
168: Meland-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
						Depth to bedrock	0.10
Keuterville-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
		Gravel	0.59	Gravel	0.59	Gravel	1.00
169: Mushel-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
170: Mushel-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dullaxe-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
171: Nakarna, high precipitation-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
172: Nakarna, high precipitation-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
173: Nakarna-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Nakarna, warm-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
174: Narnett-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
Jury-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
175: Neva-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
176: Newlig-----	85	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
177: Noil-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Keeler-----	30	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
178: Noil-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Bouldercreek, warm--	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179: Norwidge, moist-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Threebear, moist----	45	Very limited Too steep Depth to saturated zone	1.00 0.93	Very limited Too steep Depth to saturated zone	1.00 0.64	Very limited Slope Depth to saturated zone	1.00 0.93
180: Odonnell-----	65	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.49 0.93	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.49 0.64	Very limited Slope Slow water movement Depth to saturated zone	1.00 0.49 0.93
Grandad-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
181: Odonnell-----	75	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.96 0.93	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.96 0.64	Very limited Slope Slow water movement Depth to saturated zone	1.00 0.96 0.93
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
182: Itzee-----	15	Not limited		Not limited		Somewhat limited Slope	0.88
183: Pits, quarry-----	100	Not rated		Not rated		Not rated	
184: Placer-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dowper-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grangemont-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
185: Poorman, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
186: Poorman, dry-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Poorman-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
187: Poorman-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
188: Poorman-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
189: Poorman-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad, dry-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
190: Poorman-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad, dry-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
191:							
Reggear-----	55	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
		Depth to saturated zone	0.56	Depth to saturated zone	0.28	Depth to saturated zone	0.56
Kauder-----	25	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
		Depth to saturated zone	0.93	Depth to saturated zone	0.64	Depth to saturated zone	0.93
192:							
Reggear-----	50	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
		Depth to saturated zone	0.56	Depth to saturated zone	0.28	Depth to saturated zone	0.56
Seddow-----	30	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
193:							
Rettig, high elevation-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
194:							
Rettig-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
195:							
Rettig, cold-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
196:							
Rettig, cool-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig, dry-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
197:							
Rettig-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
198:							
Rettig, warm, dry---	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Township-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
199:							
Rettig-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Township, wet-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Stepoff-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
200:							
Riswold-----	50	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Cranberry-----	45	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
201:							
Riswold-----	45	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
Grangemont-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
202:							
Rock outcrop-----	35	Not rated		Not rated		Not rated	
Whiskeycreek-----	30	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
Texascreek, dry-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Depth to bedrock	1.00 0.20
203:							
Scaler-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
204:							
Scaler-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
205:							
Scaler-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grangemont-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
206:							
Scand-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
206: Scaler-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
207: Seddow-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
208: Seddow-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
209: Seddow-----	80	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
210: Setters-----	80	Very limited Depth to saturated zone Slow water movement	1.00 0.41	Very limited Depth to saturated zone Slow water movement	1.00 0.41	Very limited Depth to saturated zone Slope Slow water movement	1.00 1.00 0.41
211: Shattuck-----	90	Very limited Too steep Slow water movement	1.00 0.21	Very limited Too steep Slow water movement	1.00 0.21	Very limited Slope Slow water movement	1.00 0.21
212: Shattuck-----	90	Very limited Too steep Slow water movement	1.00 0.21	Very limited Too steep Slow water movement	1.00 0.21	Very limited Slope Slow water movement	1.00 0.21
213: Shattuck, moist----	90	Very limited Too steep Slow water movement	1.00 0.21	Very limited Too steep Slow water movement	1.00 0.21	Very limited Slope Slow water movement	1.00 0.21
214: Shattuck, moist----	50	Very limited Too steep Slow water movement	1.00 0.21	Very limited Too steep Slow water movement	1.00 0.21	Very limited Slope Slow water movement	1.00 0.21
Dworshak, moist----	40	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
215: Shattuck-----	60	Very limited Too steep Slow water movement	1.00 0.21	Very limited Too steep Slow water movement	1.00 0.21	Very limited Slope Slow water movement	1.00 0.21

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
215: Dworshak-----	35	Very limited Too steep Slow water movement	1.00 0.26	Very limited Too steep Slow water movement	1.00 0.26	Very limited Slope Slow water movement	1.00 0.26
216: Sly-----	80	Somewhat limited Slope Slow water movement	0.16 0.15	Somewhat limited Slope Slow water movement	0.16 0.15	Very limited Slope Slow water movement	1.00 0.15
Wilkins-----	15	Very limited Depth to saturated zone Flooding Dusty Slow water movement	1.00 1.00 0.50 0.45	Very limited Depth to saturated zone Dusty Slow water movement	1.00 0.50 0.45	Very limited Depth to saturated zone Slope Flooding Dusty Slow water movement	1.00 0.12 0.60 0.50 0.45
217: Southwick-----	85	Somewhat limited Depth to saturated zone	0.98	Somewhat limited Depth to saturated zone	0.75	Very limited Slope Depth to saturated zone	1.00 0.98
218: Southwick-----	45	Very limited Too steep Depth to saturated zone	1.00 0.98	Very limited Too steep Depth to saturated zone	1.00 0.75	Very limited Slope Depth to saturated zone	1.00 0.98
Larkin-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
219: Statemeadow-----	65	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Reggear-----	25	Somewhat limited Slope Slow water movement Depth to saturated zone	0.16 0.26 0.56	Somewhat limited Slope Slow water movement Depth to saturated zone	0.16 0.26 0.28	Very limited Slope Slow water movement Depth to saturated zone	1.00 0.26 0.56
220: Swayne-----	85	Very limited Too steep Slow water movement	1.00 0.41	Very limited Too steep Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
221: Taney-----	80	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.88	Very limited Depth to saturated zone Slope	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
222: Taney-----	50	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.45 0.07	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.45 0.03	Very limited Slope Slow water movement Depth to saturated zone	1.00 0.45 0.07
Joel-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
223: Taney-----	65	Very limited Depth to saturated zone Too steep	1.00 1.00	Very limited Too steep Depth to saturated zone	1.00 0.88	Very limited Depth to saturated zone Slope	1.00 1.00
McCrosket-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
224: Taney-----	55	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.88	Very limited Depth to saturated zone Slope	1.00 1.00
Setters-----	35	Very limited Depth to saturated zone Slow water movement	1.00 0.41	Very limited Depth to saturated zone Slow water movement	1.00 0.41	Very limited Depth to saturated zone Slope Slow water movement	1.00 1.00 0.41
225: Taney-----	40	Very limited Depth to saturated zone Slope	1.00 0.96	Somewhat limited Slope Depth to saturated zone	0.96 0.88	Very limited Depth to saturated zone Slope	1.00 1.00
Setters-----	40	Very limited Depth to saturated zone Slope Slow water movement	1.00 0.96 0.41	Very limited Depth to saturated zone Slope Slow water movement	1.00 0.96 0.41	Very limited Depth to saturated zone Slope Slow water movement	1.00 1.00 0.41
226: Teakean-----	80	Very limited Too steep Depth to saturated zone Slow water movement	1.00 0.77 0.05	Very limited Too steep Slow water movement Depth to saturated zone	1.00 0.05 0.43	Very limited Slope Depth to saturated zone Slow water movement	1.00 0.77 0.05



# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
227: Teneb-----	85	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.26	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.26 0.40	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.26
228: Texascreek-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Depth to bedrock	1.00 0.20
Rock outcrop-----	25	Not rated		Not rated		Not rated	
229: Texascreek, dry-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Depth to bedrock	1.00 0.20
Whiskeycreek-----	35	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Too steep Depth to bedrock	1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00
230: Norwidge-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Threebear-----	45	Very limited Too steep Depth to saturated zone	1.00 0.95	Very limited Too steep Depth to saturated zone	1.00 0.68	Very limited Slope Depth to saturated zone	1.00 0.95
231: Tomodo-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
232: Tomodo-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lado-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
233: Township-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
234: Township-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
235: Township, dry-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig, low precipitation-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Nakarna, dry-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
236: Trappercreek-----	50	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Narnett-----	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
237: Uvi-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
238: Uvi-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope Gravel	1.00 0.11
239: Vaywood, high precipitation-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Vaywood, dry-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
240: Vaywood-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
241: Vaywood-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Handoff-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
242: Water-----	100	Not rated		Not rated		Not rated	
243: Wellsbench-----	80	Somewhat limited Slow water movement	0.41	Somewhat limited Slow water movement	0.41	Very limited Slope Slow water movement Gravel	1.00 0.41 0.22

# Soil Survey of Clearwater Area, Idaho

Table 18.—Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
244: Wellsbench-----	50	Very limited Too steep Slow water movement	 1.00 0.41	Very limited Too steep Slow water movement	 1.00 0.41	Very limited Slope Slow water movement Gravel	 1.00 0.41  0.22
Lacy-----	30	Very limited Too steep Depth to bedrock	 1.00 1.00	Very limited Too steep Depth to bedrock	 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00
245: Wilkins-----	85	Very limited Depth to saturated zone Flooding Dusty Slow water movement	 1.00  1.00 0.50 0.45	Very limited Depth to saturated zone Dusty Slow water movement	 1.00  0.50 0.45	Very limited Depth to saturated zone Slope Flooding Dusty Slow water movement	 1.00  0.12 0.60 0.50 0.45

# Soil Survey of Clearwater Area, Idaho

**Table 19.—Paths, Trails, and Golf Fairways**

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Very limited Slope	1.00	Somewhat limited Slope	0.08	Very limited Too steep	1.00
3: Agatha-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
4: Ahsahka-----	45	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
Fordcreek-----	40	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
5: Ahsahka-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Whiskeycreek-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock Too steep Droughty	1.00 1.00 1.00
6: Aldermand-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
7: Aldermand-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
8: Aldermand, dry-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
9: Aquandic Cryaquepts	90	Somewhat limited Depth to saturated zone Flooding	0.68 0.40	Somewhat limited Depth to saturated zone Flooding	0.68 0.40	Very limited Flooding Depth to saturated zone	1.00 0.86
10: Aquandic Endoaquepts	60	Somewhat limited Depth to saturated zone	0.68	Somewhat limited Depth to saturated zone	0.68	Somewhat limited Depth to saturated zone Flooding	0.86 0.60

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10: Aquandic Dystrudepts	20	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
11: Bandmill, dry-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Grangemont-----	30	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.84
Bargamin-----	25	Very limited Water erosion Slope	1.00 0.92	Very limited Water erosion	1.00	Very limited Too steep	1.00
12: Bandmill-----	40	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.63
Riswold-----	30	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.63
13: Berthahill, moist---	75	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Handoff-----	15	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
14: Berthahill-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Handoff-----	20	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
15: Berthahill-----	65	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Shattuck-----	15	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
16: Bigtalk, cool-----	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Bigtalk, wet-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
17: Bigtalk-----	80	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
18: Bigtalk, cool-----	50	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Floodwood, cool-----	40	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
19: Bigtalk, cool-----	75	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Keeler, cool-----	20	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
20: Bouldercreek, moist	85	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
21: Bouldercreek-----	75	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
22: Bouldercreek-----	75	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
23: Bouldercreek, moist	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Brodeer-----	15	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
24: Bouldercreek-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Brodeer-----	25	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
25: Bouldercreek-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Judgetown-----	25	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
26: Bouldercreek, high precipitation-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Marblecreek-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
27: Bouldercreek, cool, dry-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Rettig, cool-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
28: Brequito, dry-----	65	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 0.78	Very limited Too steep	1.00
29: Brequito-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
Grangemont-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
30: Brequito-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Lado, dry-----	35	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
31: Brequito-----	60	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
Lado, dry-----	25	Not limited		Not limited		Somewhat limited Slope	0.16
32: Brequito-----	50	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Mushel-----	35	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
33: Brequito-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Mushel-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
34: Brodeer, dry-----	55	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34: Brodeer-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
35: Brodeer-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Mushel-----	40	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
36: Brodeer, warm-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Mushel, dry-----	30	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
37: Brodeer-----	65	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
Bouldercreek-----	25	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
38: Brodeer-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Flewsie, dry-----	40	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
39: Brodeer-----	60	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
Lostpete-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
40: Brodeer, moist-----	55	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Lostpete, moist-----	30	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
41: Brodeer, dry-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00



# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
41: Mushel-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
42: Brodeer-----	60	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Mushel-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
43: Burntcreek-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
44: Campra-----	80	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
45: Campra-----	45	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
Sly-----	40	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
46: Carlinton-----	80	Very limited Depth to saturated zone Water erosion Slope	1.00 1.00 1.00	Very limited Depth to saturated zone Water erosion	1.00 1.00	Very limited Too steep Depth to saturated zone	1.00 1.00
47: Carlinton-----	85	Very limited Depth to saturated zone Water erosion	1.00 1.00	Very limited Depth to saturated zone Water erosion	1.00 1.00	Very limited Depth to saturated zone Slope	1.00 0.63
48: Carlinton-----	50	Very limited Depth to saturated zone Water erosion	1.00 1.00	Very limited Depth to saturated zone Water erosion	1.00 1.00	Very limited Depth to saturated zone Slope	1.00 0.16
Kruse-----	35	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
49: Carlinton-----	55	Very limited Depth to saturated zone Water erosion	1.00 1.00	Very limited Depth to saturated zone Water erosion	1.00 1.00	Very limited Depth to saturated zone Slope	1.00 0.04
Seddow-----	35	Not limited		Not limited		Somewhat limited Slope	0.04

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
50: Caseycreek-----	80	Not limited		Not limited		Somewhat limited Depth to saturated zone	0.03
51: Cavendish-----	75	Not limited		Not limited		Not limited	
52: Cavendish-----	45	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.96
Taney-----	40	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Slope Depth to saturated zone	0.96 0.88
53: Cobbler-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Aldermant-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
54: Cobbler-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Noil-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
55: Cranberry-----	60	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
Riswold-----	20	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
56: Crumarine-----	95	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.90
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Somewhat limited Depth to saturated zone	0.32	Somewhat limited Depth to saturated zone	0.32	Somewhat limited Depth to saturated zone	0.68
59: Driscoll-----	45	Somewhat limited Slope Depth to saturated zone	0.50 0.32	Somewhat limited Depth to saturated zone	0.32	Very limited Too steep Depth to saturated zone	1.00 0.68

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
59: Larkin-----	35	Somewhat limited Slope	0.50	Not limited		Very limited Too steep	1.00
60: Dullaxe, high elevation-----	45	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Dullaxe-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
61: Dullaxe, dry-----	60	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Dullaxe, wet-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
62: Dullaxe-----	50	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Brodeer-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
63: Dullaxe-----	60	Very limited Slope Water erosion	1.00 1.00	Very limited Slope Water erosion	1.00 1.00	Very limited Too steep	1.00
Brodeer-----	25	Very limited Slope Water erosion	1.00 1.00	Very limited Slope Water erosion	1.00 1.00	Very limited Too steep	1.00
64: Dullaxe-----	60	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Judgetown-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
65: Dullaxe-----	70	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Judgetown, moist----	25	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66: Dullaxe-----	55	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Jury, moist-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
67: Dumps, wood slash---	100	Not rated		Not rated		Not rated	
68: Dworshak-----	85	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
69: Dworshak-----	80	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Brequito-----	15	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
70: Elkberry-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Elkberry, wet-----	30	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
71: Elkberry-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Dworshak-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
72: Elkridge-----	55	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
Riswold-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
73: Elkridge-----	65	Very limited Slope Water erosion	1.00 1.00	Very limited Slope Water erosion	1.00 1.00	Very limited Too steep	1.00
Riswold-----	30	Very limited Slope Water erosion	1.00 1.00	Very limited Slope Water erosion	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
74: Fico, dry-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Hucherit, warm-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Slope Water erosion	1.00 1.00	Very limited Too steep	1.00
75: Fico-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
Weitas-----	40	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
76: Flewsie, high precipitation-----	75	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
77: Flewsie, low precipitation-----	70	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Flewsie, dry-----	20	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
78: Floodwood-----	75	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
79: Floodwood, warm-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Keeler-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
80: Floodwood-----	50	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Keeler, warm-----	30	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
81: Floodwood-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Keeler, warm-----	30	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
82: Flumecreek-----	85	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
83: Flumecreek-----	65	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Stepoff-----	20	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Dworshak, dry-----	15	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
84: Fordcreek-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
85: Fordcreek-----	80	Not limited		Not limited		Somewhat limited Slope	0.16
86: Garveson, high precipitation-----	55	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Floodwood-----	30	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
87: Gramil-----	60	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Lewhand-----	30	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
88: Gramil-----	50	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Reggear-----	40	Somewhat limited Depth to saturated zone	0.01	Somewhat limited Depth to saturated zone	0.01	Somewhat limited Depth to saturated zone	0.28
89: Grandad-----	85	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
90:							
Grandad, dry-----	70	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Too steep	1.00
		Slope	1.00	Slope	0.08		
Grandad-----	20	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Too steep	1.00
		Slope	1.00	Slope	0.08		
91:							
Grandad, dry-----	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep	1.00
		Water erosion	1.00	Water erosion	1.00		
Grandad-----	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep	1.00
		Water erosion	1.00	Water erosion	1.00		
92:							
Grandad-----	55	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Too steep	1.00
		Slope	1.00				
Rettig-----	40	Very limited		Not limited		Very limited	
		Slope	1.00			Too steep	1.00
93:							
Grandad, wet-----	60	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Too steep	1.00
		Water erosion	1.00	Slope	1.00		
Rettig, wet-----	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep	1.00
94:							
Grandad, dry-----	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep	1.00
		Water erosion	1.00	Water erosion	1.00		
Scand-----	40	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Too steep	1.00
		Water erosion	1.00	Slope	1.00		
95:							
Grangemont-----	60	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84
Kauder-----	35	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84
		Depth to saturated zone	0.27	Depth to saturated zone	0.27	Depth to saturated zone	0.64
96:							
Grangemont, dry-----	50	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84
Kauder, dry-----	40	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84
		Depth to saturated zone	0.27	Depth to saturated zone	0.27	Depth to saturated zone	0.64

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
97: Grangemont-----	60	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.84
Kauder, moist-----	30	Very limited Water erosion Depth to saturated zone	1.00 0.27	Very limited Water erosion Depth to saturated zone	1.00 0.27	Somewhat limited Slope Depth to saturated zone	0.84 0.64
98: Grangemont, wet-----	45	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Too steep	1.00
Riswold-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
99: Grasshopper-----	80	Somewhat limited Depth to saturated zone	0.68	Somewhat limited Depth to saturated zone	0.68	Somewhat limited Depth to saturated zone Flooding	0.86 0.60
100: Gwin-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock Too steep Droughty Large stones	1.00 1.00 1.00 0.95
Kettenbach-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Depth to bedrock Droughty	1.00 0.06 0.09
101: Gwin-----	45	Somewhat limited Slope	0.18	Not limited		Very limited Depth to bedrock Droughty Too steep Large stones	1.00 1.00 1.00 0.95
Kettenbach-----	30	Somewhat limited Slope	0.18	Not limited		Very limited Too steep Depth to bedrock Droughty	1.00 0.06 0.09
Keuterville-----	20	Somewhat limited Slope	0.18	Not limited		Very limited Too steep	1.00
102: Hildebrand-----	55	Not limited		Not limited		Not limited	
Spacecreek, dry-----	35	Not limited		Not limited		Not limited	
103: Hubub, wet-----	75	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00



# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
104: Hubub, wet-----	65	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Dworshak-----	30	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
105: Hubub-----	65	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Too steep	1.00
Lostpete-----	20	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
106: Hucberit-----	85	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
107: Hucberit-----	40	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Vaywood, high precipitation-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
108: Hugus-----	85	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
109: Hugus-----	90	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
110: Hugus, moist-----	75	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
111: Hugus, high precipitation-----	75	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
112: Hugus, moist-----	75	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Hugus-----	15	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
113: Hugus-----	60	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Dworshak-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
114: Itzee-----	90	Not limited		Not limited		Not limited	
115: Jacket-----	80	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Too steep	1.00
116: Jacket-----	85	Not limited		Not limited		Not limited	
117: Jacket-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.08	Very limited Too steep	1.00
Wellsbench-----	35	Very limited Slope	1.00	Somewhat limited Slope	0.08	Very limited Too steep	1.00
118: Jacot-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Garveson-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
119: Jacot-----	45	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Garveson-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
120: Jaype-----	50	Somewhat limited Slope	0.92	Not limited		Very limited Too steep	1.00
Revling-----	35	Very limited Water erosion Slope	1.00 0.92	Very limited Water erosion	1.00	Very limited Too steep	1.00
121: Jaype, dry-----	65	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Revling, dry-----	15	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
122: Jaype-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.08	Very limited Too steep	1.00
Statemeadow-----	25	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.08	Very limited Too steep	1.00
123: Joel-----	50	Not limited		Not limited		Somewhat limited Slope	0.84
Setters-----	30	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Slope	1.00 0.84
124: Johnson-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
125: Johnson-----	55	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
Swayne-----	25	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
126: Johnson-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Swayne-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
127: Johnson-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Texascreek-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Depth to bedrock	1.00 0.20
128: Jury-----	80	Somewhat limited Slope	0.50	Not limited		Very limited Too steep	1.00
129: Jury-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
130: Jury, cold-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
131: Jury-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Weitas-----	35	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
132: Jury-----	60	Not limited		Not limited		Very limited Too steep	1.00
Weitas-----	30	Not limited		Not limited		Very limited Too steep	1.00
133: Kauder-----	80	Very limited Water erosion Depth to saturated zone	1.00 0.27	Very limited Water erosion Depth to saturated zone	1.00 0.27	Somewhat limited Slope Depth to saturated zone	0.84 0.64
134: Keeler, dry-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Keeler-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
135: Keeler, moist-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Keeler-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
136: Keeler-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Aldermant-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
137: Keeler-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Jacot-----	30	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
138: Keeler-----	55	Somewhat limited Slope	0.92	Not limited		Very limited Too steep	1.00
Lado-----	20	Somewhat limited Slope	0.92	Not limited		Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
139: Kettenbach-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Depth to bedrock Droughty	1.00 0.06 0.09
Gwin-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock Too steep Droughty Large stones	1.00 1.00 1.00 0.95
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140: Kettenbach-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Depth to bedrock Droughty	1.00 0.06 0.09
Keuterville-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
141: Keuterville-----	80	Somewhat limited Slope	0.18	Not limited		Very limited Too steep	1.00
142: Keuterville-----	65	Very limited Slope	1.00	Somewhat limited Slope	0.96	Very limited Too steep	1.00
143: Keuterville-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Gravel Droughty	1.00 0.59 0.02
Rock outcrop-----	20	Not rated		Not rated		Not rated	
144: Klickson-----	85	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
145: Klickson-----	70	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
146: Klickson-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Agatha-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
147:							
Klickson-----	50	Very limited Slope	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
		Water erosion	1.00	Slope	1.00		
Kettenbach-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
						Depth to bedrock	0.06
						Droughty	0.09
148:							
Klickson-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
		Water erosion	1.00	Water erosion	1.00		
Rock outcrop-----	20	Not rated		Not rated		Not rated	
Kettenbach-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
						Depth to bedrock	0.06
						Droughty	0.09
149:							
Konkol-----	45	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
		Slope	0.98				
Revling-----	25	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
		Slope	0.92				
150:							
Kooskia-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Dusty	0.50	Dusty	0.50	Too steep	1.00
151:							
Kooskia-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Dusty	0.50	Dusty	0.50		
152:							
Kruse-----	85	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
		Slope	1.00	Slope	0.08		
153:							
Kruse-----	75	Very limited Slope	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
		Water erosion	1.00	Slope	1.00		
154:							
Kruse-----	50	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
		Slope	1.00	Slope	0.22		
Aldermant-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
155: Kruse-----	50	Very limited Slope Water erosion	1.00 1.00	Very limited Slope Water erosion	1.00 1.00	Very limited Too steep	1.00
Aldermand-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
156: Kruse-----	55	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
McCrosket, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
157: Kruse-----	70	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.08	Very limited Too steep	1.00
Noil-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.08	Very limited Too steep	1.00
158: Kruse-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.56	Very limited Too steep	1.00
Teakean-----	40	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 0.08	Very limited Water erosion Slope Depth to saturated zone	1.00 0.56 0.08	Very limited Too steep Depth to saturated zone	1.00 0.43
159: Larkin-----	50	Very limited Slope	1.00	Somewhat limited Slope	0.96	Very limited Too steep	1.00
Driscoll-----	35	Very limited Slope Depth to saturated zone	1.00 0.32	Somewhat limited Slope Depth to saturated zone	0.22 0.32	Very limited Too steep Depth to saturated zone	1.00 0.68
160: Lebaron-----	45	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Latahco-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
161: Lewhand-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
161: Burntcreek-----	20	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
162: Lewhand-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Teneb-----	15	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
163: Longbar-----	55	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Bigtalk-----	35	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
164: Longbar-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Bigtalk-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
165: Longpen-----	75	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
166: Longpen-----	60	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.84
167: Meland-----	50	Not limited		Not limited		Somewhat limited Slope Depth to bedrock	0.84 0.10
Jacket-----	40	Not limited		Not limited		Somewhat limited Slope	0.84
168: Meland-----	55	Somewhat limited Slope	0.18	Not limited		Very limited Too steep Depth to bedrock	1.00 0.10
Keuterville-----	30	Very limited Slope	1.00	Not limited		Very limited Too steep Gravel Droughty	1.00 0.59 0.02



# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
169: Mushel-----	60	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Brodeer-----	30	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
170: Mushel-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Dullaxe-----	45	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
171: Nakarna, high precipitation-----	75	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
172: Nakarna, high precipitation-----	75	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
173: Nakarna-----	45	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Nakarna, warm-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
174: Narnett-----	60	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Too steep	1.00
Jury-----	20	Somewhat limited Slope	0.50	Not limited		Very limited Too steep	1.00
175: Neva-----	80	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
176: Newlig-----	85	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.84
177: Noil-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Keeler-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
178:							
Noil-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Bouldercreek, warm--	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179:							
Norwidge, moist-----	50	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Threebear, moist-----	45	Very limited Water erosion Depth to saturated zone	1.00 0.27	Very limited Water erosion Depth to saturated zone	1.00 0.27	Very limited Too steep Depth to saturated zone	1.00 0.64
180:							
Odonnell-----	65	Very limited Water erosion Slope Depth to saturated zone	1.00 0.18 0.27	Very limited Water erosion Depth to saturated zone	1.00 0.27	Very limited Too steep Depth to saturated zone	1.00 0.64
Grandad-----	15	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
181:							
Odonnell-----	75	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 0.27	Very limited Water erosion Depth to saturated zone	1.00 0.27	Very limited Too steep Depth to saturated zone	1.00 0.64
182:							
Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Itzee-----	15	Not limited		Not limited		Not limited	
183:							
Pits, quarry-----	100	Not rated		Not rated		Not rated	
184:							
Placer-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.08	Very limited Too steep	1.00
Dowper-----	30	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.08	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
184: Grangemont-----	15	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Too steep	1.00
185: Poorman, dry-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
186: Poorman, dry-----	60	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Poorman-----	30	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
187: Poorman-----	55	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Grandad-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
188: Poorman-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Grandad-----	40	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
189: Poorman-----	75	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
Grandad, dry-----	20	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
190: Poorman-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Grandad, dry-----	35	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
191: Reggear-----	55	Very limited Water erosion Depth to saturated zone	1.00 0.01	Very limited Water erosion Depth to saturated zone	1.00 0.01	Somewhat limited Slope Depth to saturated zone	0.84 0.28
Kauder-----	25	Very limited Water erosion Depth to saturated zone	1.00 0.27	Very limited Water erosion Depth to saturated zone	1.00 0.27	Somewhat limited Slope Depth to saturated zone	0.84 0.64

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
192: Reggear-----	50	Very limited Water erosion Depth to saturated zone	1.00 0.01	Very limited Water erosion Depth to saturated zone	1.00 0.01	Somewhat limited Slope Depth to saturated zone	0.16 0.28
Seddow-----	30	Not limited		Not limited		Somewhat limited Slope	0.16
193: Rettig, high elevation-----	80	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
194: Rettig-----	80	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
195: Rettig, cold-----	90	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
196: Rettig, cool-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Rettig, dry-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
197: Rettig-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Grandad-----	30	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
198: Rettig, warm, dry---	60	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Township-----	25	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
199: Rettig-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Township, wet-----	25	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Stepoff-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
200: Riswold-----	50	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
200: Cranberry-----	45	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
201: Riswold-----	45	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Grangemont-----	40	Very limited Water erosion Slope	1.00 0.50	Very limited Water erosion	1.00	Very limited Too steep	1.00
202: Rock outcrop-----	35	Not rated		Not rated		Not rated	
Whiskeycreek-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock Too steep Droughty	1.00 1.00 1.00
Texascreek, dry-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Depth to bedrock	1.00 0.20
203: Scaler-----	85	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
204: Scaler-----	60	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Grandad-----	20	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
205: Scaler-----	60	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.78	Very limited Too steep	1.00
Grangemont-----	30	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
206: Scand-----	65	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Scaler-----	15	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
207: Seddow-----	75	Somewhat limited Slope	0.50	Not limited		Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
208: Seddow-----	85	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Too steep	1.00
209: Seddow-----	80	Not limited		Not limited		Somewhat limited Slope	0.16
210: Setters-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
211: Shattuck-----	90	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
212: Shattuck-----	90	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
213: Shattuck, moist-----	90	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
214: Shattuck, moist-----	50	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Dworshak, moist-----	40	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
215: Shattuck-----	60	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Dworshak-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
216: Sly-----	80	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
Wilkins-----	15	Very limited Depth to saturated zone Dusty	1.00 0.50	Very limited Depth to saturated zone Dusty	1.00 0.50	Very limited Depth to saturated zone Flooding	1.00 0.60
217: Southwick-----	85	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
218: Southwick-----	45	Very limited Water erosion Slope Depth to saturated zone	1.00 0.02 0.44	Very limited Water erosion Depth to saturated zone	1.00 0.44	Very limited Too steep Depth to saturated zone	1.00 0.75
Larkin-----	40	Somewhat limited Slope	0.32	Not limited		Very limited Too steep	1.00
219: Statemeadow-----	65	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
Reggear-----	25	Very limited Water erosion Depth to saturated zone	1.00 0.01	Very limited Water erosion Depth to saturated zone	1.00 0.01	Somewhat limited Slope Depth to saturated zone	0.16 0.28
220: Swayne-----	85	Not limited		Not limited		Very limited Too steep	1.00
221: Taney-----	80	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Depth to saturated zone	0.88
222: Taney-----	50	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep Depth to saturated zone	1.00 0.03
Joel-----	35	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
223: Taney-----	65	Very limited Slope Depth to saturated zone	1.00 0.73	Somewhat limited Depth to saturated zone	0.73	Very limited Too steep Depth to saturated zone	1.00 0.88
McCrosket-----	25	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
224: Taney-----	55	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Depth to saturated zone	0.88
Setters-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
225: Taney-----	40	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Depth to saturated zone	0.73	Somewhat limited Slope Depth to saturated zone	0.96 0.88

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
225: Setters-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Slope	1.00 0.96
226: Teakean-----	80	Very limited Slope Water erosion Depth to saturated zone	1.00 1.00 0.08	Very limited Water erosion Slope Depth to saturated zone	1.00 1.00 0.08	Very limited Too steep Depth to saturated zone	1.00 0.43
227: Teneb-----	85	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
228: Texascreek-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Depth to bedrock	1.00 0.20
Rock outcrop-----	25	Not rated		Not rated		Not rated	
229: Texascreek, dry-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep Depth to bedrock	1.00 0.20
Whiskeycreek-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Depth to bedrock Too steep Droughty	1.00 1.00 1.00
230: Norwidge-----	45	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Threebear-----	45	Very limited Water erosion Depth to saturated zone	1.00 0.32	Very limited Water erosion Depth to saturated zone	1.00 0.32	Very limited Too steep Depth to saturated zone	1.00 0.68
231: Tomodo-----	80	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Too steep	1.00
232: Tomodo-----	60	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Lado-----	15	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00



# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
233: Township-----	55	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Rettig-----	25	Very limited Slope	1.00	Not limited		Very limited Too steep	1.00
234: Township-----	65	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Rettig-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
235: Township, dry-----	45	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
Rettig, low precipitation-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Nakarna, dry-----	20	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
236: Trappercreek-----	50	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
Narnett-----	35	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
237: Uvi-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
238: Uvi-----	90	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00
239: Vaywood, high precipitation-----	60	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Vaywood, dry-----	30	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
240: Vaywood-----	85	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 19.—Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
241: Vaywood-----	65	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
Handoff-----	20	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Too steep	1.00
242: Water-----	100	Not rated		Not rated		Not rated	
243: Wellsbench-----	80	Not limited		Not limited		Not limited	
244: Wellsbench-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep	1.00
Lacy-----	30	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Depth to bedrock Too steep Droughty	1.00 1.00 1.00
245: Wilkins-----	85	Very limited Depth to saturated zone Dusty	1.00 0.50	Very limited Depth to saturated zone Dusty	1.00 0.50	Very limited Depth to saturated zone Flooding	1.00 0.60

# Soil Survey of Clearwater Area, Idaho

**Table 20.**—Dwellings and Small Commercial Buildings

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Too steep Large stones	1.00 0.16	Very limited Too steep Large stones	1.00 0.16	Very limited Slope Large stones	1.00 0.16
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Very limited Too steep Large stones	1.00 0.16	Very limited Too steep Large stones	1.00 0.16	Very limited Slope Large stones	1.00 0.16
3: Agatha-----	75	Very limited Too steep Large stones	1.00 0.16	Very limited Too steep Large stones	1.00 0.16	Very limited Slope Large stones	1.00 0.16
4: Ahsahka-----	45	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 0.50
Fordcreek-----	40	Very limited Too steep Shrink-swell	1.00 0.06	Very limited Too steep Shrink-swell	1.00 0.06	Very limited Slope Shrink-swell	1.00 0.06
5: Ahsahka-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 0.50
Whiskeycreek-----	30	Very limited Too steep Depth to hard bedrock	1.00 1.00	Very limited Too steep Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
6: Aldermant-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
7: Aldermant-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
8: Aldermant, dry-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
9: Aquandic Cryaquepts	90	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10: Aquandic Endoaquepts	60	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Aquandic Dystrudepts	20	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
11: Bandmill, dry-----	40	Very limited Too steep Shrink-swell	1.00 0.78	Very limited Too steep Shrink-swell	1.00 0.78	Very limited Slope Shrink-swell	1.00 0.78
Grangemont-----	30	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Bargamin-----	25	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Shrink-swell Too steep	1.00 1.00	Very limited Slope Shrink-swell	1.00 0.50
12: Bandmill-----	40	Somewhat limited Shrink-swell Slope	0.78 0.63	Somewhat limited Shrink-swell Slope	0.78 0.63	Very limited Slope Shrink-swell	1.00 0.78
Riswold-----	30	Somewhat limited Slope Shrink-swell	0.63 0.50	Somewhat limited Slope Shrink-swell	0.63 0.50	Very limited Slope Shrink-swell	1.00 0.50
13: Berthahill, moist---	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Handoff-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
14: Berthahill-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Handoff-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
15: Berthahill-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Shattuck-----	15	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
16: Bigtalk, cool-----	60	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16: Bigtalk, wet-----	25	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
17: Bigtalk-----	80	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
18: Bigtalk, cool-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Floodwood, cool-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
19: Bigtalk, cool-----	75	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Keeler, cool-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
20: Bouldercreek, moist	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
21: Bouldercreek-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
22: Bouldercreek-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
23: Bouldercreek, moist	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
24: Bouldercreek-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
25: Bouldercreek-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Judgetown-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
26: Bouldercreek, high precipitation-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Marblecreek-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
27: Bouldercreek, cool, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig, cool-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
28: Brequito, dry-----	65	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
29: Brequito-----	45	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
Grangemont-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
30: Brequito-----	45	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
Lado, dry-----	35	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
31: Brequito-----	60	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Slope	0.16	Very limited Slope Shrink-swell	1.00 0.50
Lado, dry-----	25	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 0.50
32: Brequito-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
Mushel-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
33: Brequito-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
33: Mushel-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
34: Brodeer, dry-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
35: Brodeer-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
36: Brodeer, warm-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel, dry-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
37: Brodeer-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Bouldercreek-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
38: Brodeer-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Flewsie, dry-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
39: Brodeer-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lostpete-----	35	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
40: Brodeer, moist-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lostpete, moist-----	30	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
41: Brodeer, dry-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
41: Mushel-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
42: Brodeer-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Mushel-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
43: Burntcreek-----	80	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
44: Campra-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
45: Campra-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Sly-----	40	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.22	Very limited Slope Shrink-swell	1.00 0.50
46: Carlinton-----	80	Very limited Too steep Depth to saturated zone Depth to thin cemented pan	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to saturated zone	1.00 1.00
47: Carlinton-----	85	Very limited Depth to saturated zone Slope Depth to thin cemented pan	1.00 0.63 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.63 0.50	Very limited Depth to saturated zone Slope	1.00 1.00
48: Carlinton-----	50	Very limited Depth to saturated zone Slope Depth to thin cemented pan	1.00 0.16 0.50	Very limited Depth to saturated zone Shrink-swell Slope	1.00 0.50 0.16	Very limited Depth to saturated zone Slope	1.00 1.00
Kruse-----	35	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50



# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
49: Carlinton-----	55	Very limited Depth to saturated zone Slope Depth to thin cemented pan	1.00 0.04 0.50	Very limited Depth to saturated zone Shrink-swell Slope	1.00 0.50 0.04	Very limited Depth to saturated zone Slope	1.00 1.00
Seddow-----	35	Somewhat limited Shrink-swell Slope	0.50 0.04	Somewhat limited Shrink-swell Slope Depth to hard bedrock	0.50 0.04 0.88	Very limited Slope Shrink-swell	1.00 0.50
50: Caseycreek-----	80	Somewhat limited Depth to saturated zone	0.07	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.07
51: Cavendish-----	75	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Slope	0.50 0.12
52: Cavendish-----	45	Somewhat limited Slope Shrink-swell	0.96 0.50	Somewhat limited Slope Shrink-swell	0.96 0.50	Very limited Slope Shrink-swell	1.00 0.50
Taney-----	40	Very limited Depth to saturated zone Slope Depth to thin cemented pan	1.00 0.96 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.96 0.50	Very limited Slope Depth to saturated zone	1.00 1.00
53: Cobbler-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Aldermand-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
54: Cobbler-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Noil-----	45	Very limited Too steep Large stones	1.00 0.03	Very limited Too steep Large stones	1.00 0.03	Very limited Slope Large stones	1.00 0.03
55: Cranberry-----	60	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Riswold-----	20	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
56: Crumarine-----	95	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Very limited Shrink-swell Depth to saturated zone	1.00 0.95	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Shrink-swell Slope Depth to saturated zone	1.00 1.00 0.95
59: Driscoll-----	45	Very limited Shrink-swell Too steep Depth to saturated zone	1.00 1.00 0.95	Very limited Depth to saturated zone Shrink-swell Too steep	1.00 1.00 1.00	Very limited Slope Shrink-swell Depth to saturated zone	1.00 1.00 0.95
Larkin-----	35	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
60: Dullaxe, high elevation-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dullaxe-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
61: Dullaxe, dry-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dullaxe, wet-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
62: Dullaxe-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
63: Dullaxe-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
64: Dullaxe-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64: Judgetown-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
65: Dullaxe-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Judgetown, moist----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
66: Dullaxe-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Jury, moist-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
67: Dumps, wood slash---	100	Not rated		Not rated		Not rated	
68: Dworshak-----	85	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
69: Dworshak-----	80	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Brequito-----	15	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
70: Elkberry-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Elkberry, wet-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
71: Elkberry-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dworshak-----	40	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
72: Elkridge-----	55	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Riswold-----	40	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73: Elkridge-----	65	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Riswold-----	30	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
74: Fico, dry-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Hucberit, warm-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
75: Fico-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Weitas-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
76: Flewsie, high precipitation-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
77: Flewsie, low precipitation-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Flewsie, dry-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
78: Floodwood-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
79: Floodwood, warm-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Keeler-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
80: Floodwood-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Keeler, warm-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
81: Floodwood-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Keeler, warm-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
82: Flumecreek-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
83: Flumecreek-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Stepoff-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dworshak, dry-----	15	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
84: Fordcreek-----	70	Very limited Too steep Shrink-swell	1.00 0.06	Very limited Too steep Shrink-swell	1.00 0.06	Very limited Slope Shrink-swell	1.00 0.06
85: Fordcreek-----	80	Somewhat limited Slope Shrink-swell	0.16 0.06	Somewhat limited Slope Shrink-swell	0.16 0.06	Very limited Slope Shrink-swell	1.00 0.06
86: Garveson, high precipitation-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Floodwood-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
87: Gramil-----	60	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Lewhand-----	30	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
88: Gramil-----	50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Reggear-----	40	Somewhat limited Shrink-swell Depth to saturated zone Depth to thin cemented pan	0.50 0.56 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.56

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89: Grandad-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
90: Grandad, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
91: Grandad, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
92: Grandad-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
93: Grandad, wet-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig, wet-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
94: Grandad, dry-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Scand-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
95: Grangemont-----	60	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Kauder-----	35	Somewhat limited Slope Depth to saturated zone Depth to thin cemented pan	0.84 0.93 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.84 0.50	Very limited Slope Depth to saturated zone	1.00 0.93
96: Grangemont, dry-----	50	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Kauder, dry-----	40	Somewhat limited Slope Depth to saturated zone Depth to thin cemented pan	0.84 0.93 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.84 0.50	Very limited Slope Depth to saturated zone	1.00 0.93

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97: Grangemont-----	60	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Kauder, moist-----	30	Somewhat limited Slope	0.84	Very limited Depth to saturated zone	1.00	Very limited Slope	1.00
		Depth to saturated zone	0.93	Slope	0.84	Depth to saturated zone	0.93
		Depth to thin cemented pan	0.50	Shrink-swell	0.50		
98: Grangemont, wet-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Riswold-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
99: Grasshopper-----	80	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
100: Gwin-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Large stones	0.04	Large stones	0.04	Large stones	0.04
Kettenbach-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Large stones	0.22	bedrock		Large stones	0.22
		Depth to hard bedrock	0.06	Shrink-swell	0.50	Depth to hard bedrock	0.06
				Large stones	0.22		
101: Gwin-----	45	Very limited Depth to hard bedrock	1.00	Very limited Depth to hard bedrock	1.00	Very limited Slope	1.00
		Too steep	1.00	Too steep	1.00	Depth to hard bedrock	1.00
		Large stones	0.04	Large stones	0.04	Large stones	0.04
Kettenbach-----	30	Very limited Too steep	1.00	Very limited Depth to hard bedrock	1.00	Very limited Slope	1.00
		Shrink-swell	0.50	bedrock		Shrink-swell	0.50
		Large stones	0.22	Too steep	1.00	Large stones	0.22
		Depth to hard bedrock	0.06	Shrink-swell	0.50	Depth to hard bedrock	0.06
				Large stones	0.22		
Keuterville-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
102: Hildebrand-----	55	Not limited		Very limited Depth to saturated zone	1.00	Somewhat limited Slope	0.12

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102: Spacecreek, dry-----	35	Not limited		Very limited Depth to saturated zone	1.00	Somewhat limited Slope	0.12
103: Hubub, wet-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
104: Hubub, wet-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dworshak-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
105: Hubub-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lostpete-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
106: Hucherit-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
107: Hucherit-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Vaywood, high precipitation-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
108: Hugus-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
109: Hugus-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
110: Hugus, moist-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
111: Hugus, high precipitation-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
112: Hugus, moist-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Hugus-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00



# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
113: Hugus-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dworshak-----	35	Very limited Too steep Shrink-swell	1.00 1.00 0.50	Very limited Too steep Shrink-swell	1.00 1.00 0.50	Very limited Slope Shrink-swell	1.00 1.00 0.50
114: Itzee-----	90	Not limited		Not limited		Not limited	
115: Jacket-----	80	Very limited Shrink-swell Too steep	1.00 1.00	Very limited Shrink-swell Too steep	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
116: Jacket-----	85	Somewhat limited Shrink-swell	0.50	Very limited Shrink-swell	1.00	Very limited Slope Shrink-swell	1.00 0.50
117: Jacket-----	45	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Wellsbench-----	35	Very limited Too steep Shrink-swell Large stones	1.00 1.00 0.50 0.11	Very limited Too steep Shrink-swell Large stones Depth to hard bedrock	1.00 1.00 0.50 0.11 0.99	Very limited Slope Shrink-swell Large stones	1.00 1.00 0.50 0.11
118: Jacot-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Garveson-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
119: Jacot-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Garveson-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
120: Jaype-----	50	Very limited Too steep Shrink-swell	1.00 1.00 0.50	Very limited Too steep Shrink-swell	1.00 1.00 0.50	Very limited Slope Shrink-swell	1.00 1.00 0.50
Revling-----	35	Very limited Too steep Shrink-swell	1.00 1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
121: Jaype, dry-----	65	Very limited Too steep Shrink-swell	1.00 1.00 0.50	Very limited Too steep Shrink-swell	1.00 1.00 0.50	Very limited Slope Shrink-swell	1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Revling, dry-----	15	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
122: Jaype-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Statemeadow-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
123: Joel-----	50	Somewhat limited Slope	0.84	Somewhat limited Slope Shrink-swell	0.84 0.50	Very limited Slope	1.00
Setters-----	30	Very limited Depth to saturated zone Slope	1.00 0.84	Very limited Depth to saturated zone Shrink-swell Slope	1.00 1.00 0.84	Very limited Depth to saturated zone Slope	1.00 1.00
124: Johnson-----	75	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
125: Johnson-----	55	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Swayne-----	25	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
126: Johnson-----	45	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Swayne-----	40	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Too steep Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
127: Johnson-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Texascreek-----	35	Very limited Too steep	1.00	Very limited Too steep Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
128: Jury-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
129: Jury-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
130: Jury, cold-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
131: Jury-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Weitas-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
132: Jury-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Weitas-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
133: Kauder-----	80	Somewhat limited Slope Depth to saturated zone Depth to thin cemented pan	0.84 0.93 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.84 0.50	Very limited Slope Depth to saturated zone	1.00 0.93
134: Keeler, dry-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Keeler-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
135: Keeler, moist-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Keeler-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
136: Keeler-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Aldermant-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
137: Keeler-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Jacot-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
138:							
Keeler-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Lado-----	20	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
139:							
Kettenbach-----	40	Very limited Too steep Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06	Very limited Too steep Depth to hard bedrock Shrink-swell Large stones	1.00 1.00 0.50 0.22	Very limited Slope Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06
Gwin-----	35	Very limited Too steep Depth to hard bedrock Large stones	1.00 1.00 0.04	Very limited Too steep Depth to hard bedrock Large stones	1.00 1.00 0.04	Very limited Slope Depth to hard bedrock Large stones	1.00 1.00 0.04
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140:							
Kettenbach-----	45	Very limited Too steep Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06	Very limited Too steep Depth to hard bedrock Shrink-swell Large stones	1.00 1.00 0.50 0.22	Very limited Slope Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06
Keuterville-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
141:							
Keuterville-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
142:							
Keuterville-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
143:							
Keuterville-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
144:							
Klickson-----	85	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
145:							
Klickson-----	70	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
146:							
Klickson-----	50	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
Agatha-----	35	Very limited Too steep Large stones	1.00 0.16	Very limited Too steep Large stones	1.00 0.16	Very limited Slope Large stones	1.00 0.16
147:							
Klickson-----	50	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
Kettenbach-----	30	Very limited Too steep Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06	Very limited Too steep Depth to hard bedrock Shrink-swell Large stones	1.00 1.00 0.50 0.22	Very limited Slope Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06
148:							
Klickson-----	50	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
Kettenbach-----	15	Very limited Too steep Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06	Very limited Too steep Depth to hard bedrock Shrink-swell Large stones	1.00 1.00 0.50 0.22	Very limited Slope Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.22 0.06
149:							
Konkol-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Revling-----	25	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep	1.00	Very limited Slope Shrink-swell	1.00 0.50
150:							
Kooskia-----	80	Very limited Depth to saturated zone Shrink-swell Too steep	1.00 1.00 1.00	Very limited Depth to saturated zone Shrink-swell Too steep	1.00 1.00 1.00	Very limited Slope Depth to saturated zone Shrink-swell	1.00 1.00 1.00
151:							
Kooskia-----	80	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Shrink-swell Slope	1.00 1.00 1.00 0.72

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
152: Kruse-----	85	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
153: Kruse-----	75	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
154: Kruse-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Aldermant-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
155: Kruse-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Aldermant-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
156: Kruse-----	55	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
McCrosket, dry-----	40	Very limited Too steep Large stones	1.00 0.84	Very limited Too steep Large stones	1.00 0.84	Very limited Slope Large stones	1.00 0.84
157: Kruse-----	70	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Noil-----	20	Very limited Too steep Large stones	1.00 0.03	Very limited Too steep Large stones	1.00 0.03	Very limited Slope Large stones	1.00 0.03
158: Kruse-----	45	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Teakean-----	40	Very limited Too steep Shrink-swell Depth to saturated zone Depth to thin cemented pan	1.00 0.50 0.77 0.50	Very limited Too steep Depth to saturated zone Shrink-swell	1.00 0.50 1.00 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.77

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
159:							
Larkin-----	50	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Driscoll-----	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	1.00	Depth to saturated	1.00	Shrink-swell	1.00
		Depth to saturated	0.95	zone		Depth to saturated	0.95
		zone		Shrink-swell	1.00	zone	
160:							
Lebaron-----	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
Latahco-----	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
				Shrink-swell	0.50		
161:							
Lewhand-----	65	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
Burntcreek-----	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
162:							
Lewhand-----	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
Teneb-----	15	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
163:							
Longbar-----	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Bigtalk-----	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
164:							
Longbar-----	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
164: Bigtalk-----	35	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
165: Longpen-----	75	Very limited Too steep Shrink-swell	1.00 0.06	Very limited Too steep Shrink-swell	1.00 0.06	Very limited Slope Shrink-swell	1.00 0.06
166: Longpen-----	60	Somewhat limited Slope Shrink-swell	0.84 0.06	Somewhat limited Slope Shrink-swell	0.84 0.06	Very limited Slope Shrink-swell	1.00 0.06
167: Meland-----	50	Somewhat limited Slope Shrink-swell Depth to hard bedrock	0.84 0.50 0.10	Very limited Depth to hard bedrock Slope Shrink-swell	1.00 0.84 0.50	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 0.50 0.10
Jacket-----	40	Somewhat limited Slope Shrink-swell	0.84 0.50	Very limited Shrink-swell Slope	1.00 0.84	Very limited Slope Shrink-swell	1.00 0.50
168: Meland-----	55	Very limited Too steep Shrink-swell Depth to hard bedrock	1.00 0.50 0.10	Very limited Depth to hard bedrock Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell Depth to hard bedrock	1.00 0.50 0.10
Keuterville-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
169: Mushel-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Brodeer-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
170: Mushel-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dullaxe-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
171: Nakarna, high precipitation-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
172: Nakarna, high precipitation-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00



# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
173: Nakarna-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Nakarna, warm-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
174: Narnett-----	60	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Jury-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
175: Neva-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
176: Newlig-----	85	Somewhat limited Slope Shrink-swell	0.84 0.50	Somewhat limited Slope Shrink-swell	0.84 0.50	Very limited Slope Shrink-swell	1.00 0.50
177: Noil-----	45	Very limited Too steep Large stones	1.00 0.03	Very limited Too steep Large stones	1.00 0.03	Very limited Slope Large stones	1.00 0.03
Keeler-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
178: Noil-----	70	Very limited Too steep Large stones	1.00 0.03	Very limited Too steep Large stones	1.00 0.03	Very limited Slope Large stones	1.00 0.03
Bouldercreek, warm--	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179: Norwidge, moist-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Threebear, moist-----	45	Very limited Too steep Shrink-swell Depth to saturated zone Depth to thin cemented pan	1.00 0.50 0.93 0.50	Very limited Depth to saturated zone Too steep Shrink-swell	1.00 1.00 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.93
180: Odonnell-----	65	Very limited Too steep Depth to saturated zone	1.00 0.93	Very limited Depth to saturated zone Too steep	1.00 1.00	Very limited Slope Depth to saturated zone	1.00 0.93

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
180: Grandad-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
181: Odonnell-----	75	Very limited Too steep Depth to saturated zone	1.00 0.93	Very limited Too steep Depth to saturated zone	1.00 1.00	Very limited Slope Depth to saturated zone	1.00 0.93
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Itzee-----	15	Not limited		Not limited		Somewhat limited Slope	0.12
183: Pits, quarry-----	100	Not rated		Not rated		Not rated	
184: Placer-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Dowper-----	30	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Grangemont-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
185: Poorman, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
186: Poorman, dry-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Poorman-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
187: Poorman-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
188: Poorman-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
189: Poorman-----	75	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad, dry-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
190: Poorman-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad, dry-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
191: Reggear-----	55	Somewhat limited Slope Shrink-swell Depth to saturated zone Depth to thin cemented pan	0.84 0.50 0.56 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.84 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.56
Kauder-----	25	Somewhat limited Slope Depth to saturated zone Depth to thin cemented pan	0.84 0.93 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.84 0.50	Very limited Slope Depth to saturated zone	1.00 0.93
192: Reggear-----	50	Somewhat limited Shrink-swell Slope Depth to saturated zone Depth to thin cemented pan	0.50 0.16 0.56 0.50	Very limited Depth to saturated zone Shrink-swell Slope	1.00 0.50 0.16	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.56
Seddow-----	30	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope Depth to hard bedrock	0.50 0.16 0.88	Very limited Slope Shrink-swell	1.00 0.50
193: Rettig, high elevation-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
194: Rettig-----	80	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
195: Rettig, cold-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
196:							
Rettig, cool-----	50	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Rettig, dry-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
197:							
Rettig-----	45	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
198:							
Rettig, warm, dry---	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Township-----	25	Very limited Too steep Large stones	1.00 0.28	Very limited Too steep Large stones	1.00 0.28	Very limited Slope Large stones	1.00 0.28
199:							
Rettig-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Township, wet-----	25	Very limited Too steep Large stones	1.00 0.28	Very limited Too steep Large stones	1.00 0.28	Very limited Slope Large stones	1.00 0.28
Stepoff-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
200:							
Riswold-----	50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Cranberry-----	45	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 0.50
201:							
Riswold-----	45	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Grangemont-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
202:							
Rock outcrop-----	35	Not rated		Not rated		Not rated	
Whiskeycreek-----	30	Very limited Too steep Depth to hard bedrock	1.00 1.00	Very limited Too steep Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
202: Texascreek, dry-----	25	Very limited Too steep	1.00	Very limited Too steep Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
203: Scaler-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
204: Scaler-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
205: Scaler-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Grangemont-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
206: Scand-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Scaler-----	15	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
207: Seddow-----	75	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell Depth to hard bedrock	1.00 0.50 0.88	Very limited Slope Shrink-swell	1.00 0.50
208: Seddow-----	85	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell Depth to hard bedrock	1.00 0.50 0.88	Very limited Slope Shrink-swell	1.00 0.50
209: Seddow-----	80	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope Depth to hard bedrock	0.50 0.16 0.88	Very limited Slope Shrink-swell	1.00 0.50
210: Setters-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Slope	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
211: Shattuck-----	90	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
212: Shattuck-----	90	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
213: Shattuck, moist----	90	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
214: Shattuck, moist----	50	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
Dworshak, moist----	40	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
215: Shattuck-----	60	Very limited Too steep	1.00	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope	1.00
Dworshak-----	35	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
216: Sly-----	80	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.22 0.16	Very limited Slope Shrink-swell	1.00 0.50
Wilkins-----	15	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
217: Southwick-----	85	Somewhat limited Shrink-swell Depth to saturated zone Depth to thin cemented pan	0.50 0.98 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.98
218: Southwick-----	45	Very limited Too steep Shrink-swell Depth to saturated zone Depth to thin cemented pan	1.00 0.50 0.98 0.50	Very limited Depth to saturated zone Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.98

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
218: Larkin-----	40	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
219: Statemeadow-----	65	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Reggear-----	25	Somewhat limited Shrink-swell Slope Depth to saturated zone Depth to thin cemented pan	0.50 0.16 0.56 0.50	Very limited Depth to saturated zone Shrink-swell Slope	1.00 0.50 0.16	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.56
220: Swayne-----	85	Very limited Shrink-swell Too steep	1.00 1.00	Very limited Shrink-swell Too steep	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
221: Taney-----	80	Very limited Depth to saturated zone Depth to thin cemented pan	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Slope	1.00 0.88
222: Taney-----	50	Very limited Too steep Shrink-swell Depth to thin cemented pan Depth to saturated zone	1.00 0.50 0.50 0.07	Very limited Depth to saturated zone Too steep Shrink-swell	1.00 1.00 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.07
Joel-----	35	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
223: Taney-----	65	Very limited Too steep Depth to saturated zone Depth to thin cemented pan	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Slope Depth to saturated zone	1.00 1.00
McCrosket-----	25	Very limited Too steep Large stones	1.00 0.84	Very limited Too steep Large stones	1.00 0.84	Very limited Slope Large stones	1.00 0.84
224: Taney-----	55	Very limited Depth to saturated zone Depth to thin cemented pan	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Slope	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
224: Setters-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Depth to saturated zone Slope	1.00 0.50
225: Taney-----	40	Very limited Depth to saturated zone Slope Depth to thin cemented pan	1.00 0.96 0.50	Very limited Depth to saturated zone Slope Shrink-swell	1.00 0.96 0.50	Very limited Slope Depth to saturated zone	1.00 1.00
Setters-----	40	Very limited Depth to saturated zone Slope	1.00 0.96	Very limited Depth to saturated zone Shrink-swell Slope	1.00 1.00 0.96	Very limited Slope Depth to saturated zone	1.00 1.00
226: Teakean-----	80	Very limited Too steep Shrink-swell Depth to saturated zone Depth to thin cemented pan	1.00 0.50 0.77 0.50	Very limited Too steep Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.77
227: Teneb-----	85	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
228: Texascreek-----	55	Very limited Too steep	1.00	Very limited Too steep Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
Rock outcrop-----	25	Not rated		Not rated		Not rated	
229: Texascreek, dry-----	45	Very limited Too steep	1.00	Very limited Too steep Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
Whiskeycreek-----	35	Very limited Too steep Depth to hard bedrock	1.00 1.00	Very limited Too steep Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
230: Norwidge-----	45	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50



# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
230: Threebear-----	45	Very limited Too steep Shrink-swell Depth to saturated zone Depth to thin cemented pan	1.00 0.50 0.95 0.50	Very limited Depth to saturated zone Too steep Shrink-swell	1.00 1.00 1.00 0.50	Very limited Slope Shrink-swell Depth to saturated zone	1.00 1.00 0.50 0.95
231: Tomodo-----	80	Very limited Too steep Depth to thin cemented pan	1.00 0.50	Very limited Too steep	1.00	Very limited Slope	1.00
232: Tomodo-----	60	Very limited Too steep Depth to thin cemented pan	1.00 0.50	Very limited Too steep	1.00	Very limited Slope	1.00
Lado-----	15	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Too steep Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
233: Township-----	55	Very limited Too steep Large stones	1.00 0.28	Very limited Too steep Large stones	1.00 0.28	Very limited Slope Large stones	1.00 1.00 0.28
Rettig-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
234: Township-----	65	Very limited Too steep Large stones	1.00 0.28	Very limited Too steep Large stones	1.00 0.28	Very limited Slope Large stones	1.00 1.00 0.28
Rettig-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
235: Township, dry-----	45	Very limited Too steep Large stones	1.00 0.28	Very limited Too steep Large stones	1.00 0.28	Very limited Slope Large stones	1.00 1.00 0.28
Rettig, low precipitation-----	25	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Nakarna, dry-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
236: Trappercreek-----	50	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
236: Narnett-----	35	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 0.50
237: Uvi-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
238: Uvi-----	90	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
239: Vaywood, high precipitation-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Vaywood, dry-----	30	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
240: Vaywood-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
241: Vaywood-----	65	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
Handoff-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Slope	1.00
242: Water-----	100	Not rated		Not rated		Not rated	
243: Wellsbench-----	80	Somewhat limited Shrink-swell Large stones	0.50 0.11	Somewhat limited Shrink-swell Large stones Depth to hard bedrock	0.50 0.11 0.99	Somewhat limited Slope Shrink-swell Large stones	0.50 0.50 0.11
244: Wellsbench-----	50	Very limited Too steep Shrink-swell Large stones	1.00 0.50 0.11	Very limited Too steep Shrink-swell Large stones Depth to hard bedrock	1.00 0.50 0.11 0.99	Very limited Slope Shrink-swell Large stones	1.00 0.50 0.11
Lacy-----	30	Very limited Too steep Depth to hard bedrock Large stones Shrink-swell	1.00 1.00 0.82 0.50	Very limited Too steep Depth to hard bedrock Large stones Shrink-swell	1.00 1.00 0.82 0.50	Very limited Slope Depth to hard bedrock Large stones Shrink-swell	1.00 1.00 0.82 0.50

# Soil Survey of Clearwater Area, Idaho

Table 20.—Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
245: Wilkins-----	85	Very limited Flooding Depth to saturated zone Shrink-swell	 1.00 1.00  1.00	Very limited Flooding Depth to saturated zone Shrink-swell	 1.00 1.00  1.00	Very limited Flooding Depth to saturated zone Shrink-swell	 1.00 1.00  1.00

# Soil Survey of Clearwater Area, Idaho

**Table 21.**—Roads and Streets, Shallow Excavations, and Lawns and Landscaping

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Too steep Large stones Frost action	 1.00 0.16 0.50	Very limited Too steep Unstable excavation walls Large stones	 1.00 1.00  0.16	Very limited Too steep	 1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Very limited Too steep Large stones Frost action	 1.00 0.16 0.50	Very limited Too steep Unstable excavation walls Large stones	 1.00 1.00  0.16	Very limited Too steep	 1.00
3: Agatha-----	75	Very limited Too steep Large stones Frost action	 1.00 0.16 0.50	Very limited Too steep Unstable excavation walls Large stones	 1.00 1.00  0.16	Very limited Too steep	 1.00
4: Ahsahka-----	45	Very limited Too steep Shrink-swell Low strength Frost action	 1.00 0.50 0.22 0.50	Very limited Too steep Too clayey Unstable excavation walls	 1.00 0.12 0.10  	Very limited Too steep	 1.00
Fordcreek-----	40	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.06 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10  	Very limited Too steep	 1.00
5: Ahsahka-----	50	Very limited Too steep Shrink-swell Low strength Frost action	 1.00 0.50 0.22 0.50	Very limited Too steep Too clayey Unstable excavation walls	 1.00 0.12 0.10  	Very limited Too steep	 1.00
Whiskeycreek-----	30	Very limited Depth to hard bedrock Too steep	 1.00  1.00	Very limited Depth to hard bedrock Too steep Unstable excavation walls	 1.00  1.00 0.10  	Very limited Depth to bedrock Too steep Droughty	 1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6: Aldermant-----	85	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
7: Aldermant-----	90	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
8: Aldermant, dry-----	75	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
9: Aquandic Cryaquepts	90	Very limited Flooding Depth to saturated zone Frost action	1.00 0.86 0.50	Very limited Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	1.00 0.86
10: Aquandic Endoaquepts	60	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 0.86	Very limited Depth to saturated zone Flooding Unstable excavation walls	1.00 0.60 0.10	Somewhat limited Depth to saturated zone Flooding	0.86 0.60
Aquandic Dystrudepts	20	Very limited Depth to saturated zone Flooding Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Unstable excavation walls Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
11: Bandmill, dry-----	40	Very limited Frost action Low strength Too steep Shrink-swell	1.00 1.00 1.00 0.78	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Grangemont-----	30	Very limited Frost action Low strength Slope	1.00 1.00 0.84	Somewhat limited Slope Unstable excavation walls	0.84 0.10	Somewhat limited Slope	0.84
Bargamin-----	25	Very limited Frost action Low strength Too steep Shrink-swell	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
12: Bandmill-----	40	Very limited Frost action Low strength Shrink-swell Slope	 1.00 1.00 0.78 0.63	Somewhat limited Slope Unstable excavation walls	 0.63 0.10	Somewhat limited Slope	 0.63
Riswold-----	30	Very limited Frost action Low strength Slope Shrink-swell	 1.00 0.78 0.63 0.50	Somewhat limited Slope Unstable excavation walls	 0.63 0.10	Somewhat limited Slope	 0.63
13: Berthahill, moist---	75	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Handoff-----	15	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
14: Berthahill-----	70	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Handoff-----	20	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
15: Berthahill-----	65	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Shattuck-----	15	Very limited Too steep Frost action Low strength	 1.00 1.00 0.22	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
16: Bigtalk, cool-----	60	Very limited Too steep Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Bigtalk, wet-----	25	Very limited Too steep Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17: Bigtalk-----	80	Very limited Too steep Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
18: Bigtalk, cool-----	50	Very limited Too steep Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
Floodwood, cool-----	40	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10 1.00	Very limited Too steep	 1.00
19: Bigtalk, cool-----	75	Very limited Too steep Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
Keeler, cool-----	20	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
20: Bouldercreek, moist	85	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
21: Bouldercreek-----	75	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
22: Bouldercreek-----	75	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
23: Bouldercreek, moist	75	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00
Brodeer-----	15	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00 1.00	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24: Bouldercreek-----	65	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Brodeer-----	25	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
25: Bouldercreek-----	55	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Judgetown-----	25	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
26: Bouldercreek, high precipitation-----	50	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Marblecreek-----	30	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
27: Bouldercreek, cool, dry-----	70	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Rettig, cool-----	25	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
28: Brequito, dry-----	65	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
29: Brequito-----	45	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00



# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29: Grangemont-----	40	Very limited Too steep Frost action Low strength	 1.00 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
30: Brequito-----	45	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
Lado, dry-----	35	Very limited Too steep Frost action Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
31: Brequito-----	60	Very limited Low strength Shrink-swell Slope Frost action	 1.00 0.50 0.16 0.50	Somewhat limited Slope Unstable excavation walls	 0.16 0.10	Somewhat limited Slope	 0.16
Lado, dry-----	25	Very limited Frost action Low strength Shrink-swell Slope	 1.00 0.78 0.50 0.16	Somewhat limited Slope Unstable excavation walls	 0.16 0.10	Somewhat limited Slope	 0.16
32: Brequito-----	50	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
Mushel-----	35	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
33: Brequito-----	50	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
Mushel-----	35	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34: Brodeer, dry-----	55	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Brodeer-----	40	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
35: Brodeer-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Mushel-----	40	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
36: Brodeer, warm-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Mushel, dry-----	30	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
37: Brodeer-----	65	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Bouldercreek-----	25	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
38: Brodeer-----	50	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Flewsie, dry-----	40	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
39: Brodeer-----	60	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Lostpete-----	35	Very limited Too steep Frost action Shrink-swell Low strength	1.00 1.00 0.50 0.22	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
40: Brodeer, moist-----	55	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Lostpete, moist-----	30	Very limited Too steep Frost action Shrink-swell Low strength	1.00 1.00 0.50 0.22	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
41: Brodeer, dry-----	50	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Mushel-----	40	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
42: Brodeer-----	60	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Mushel-----	35	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
43: Burntcreek-----	80	Very limited Depth to saturated zone Flooding Low strength Frost action	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Unstable excavation walls	1.00 0.60 0.10	Very limited Depth to saturated zone Flooding	1.00 0.60
44: Campra-----	80	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45: Campra-----	45	Very limited Too steep Frost action	1.00 0.50	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep	1.00
Sly-----	40	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
46: Carlinton-----	80	Very limited Too steep Depth to saturated zone Frost action Low strength	1.00 1.00 1.00 1.00	Very limited Too steep Depth to saturated zone Unstable excavation walls	1.00 1.00 0.10	Very limited Too steep Depth to saturated zone	1.00
47: Carlinton-----	85	Very limited Depth to saturated zone Frost action Low strength Slope	1.00 1.00 1.00 0.63	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.63 0.10	Very limited Depth to saturated zone Slope	1.00 0.63
48: Carlinton-----	50	Very limited Depth to saturated zone Frost action Low strength Slope	1.00 1.00 1.00 0.16	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.16 0.10	Very limited Depth to saturated zone Slope	1.00 0.16
Kruse-----	35	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep	1.00
49: Carlinton-----	55	Very limited Depth to saturated zone Frost action Low strength Slope	1.00 1.00 1.00 0.04	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.04 0.10	Very limited Depth to saturated zone Slope	1.00 0.04
Seddow-----	35	Very limited Low strength Shrink-swell Slope Frost action	1.00 0.50 0.04 0.50	Very limited Unstable excavation walls Slope Depth to hard bedrock	1.00 0.04 0.88	Somewhat limited Slope	0.04

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
50: Caseycreek-----	80	Somewhat limited Frost action Depth to saturated zone	0.50 0.03	Very limited Depth to saturated zone Unstable excavation walls	1.00 1.00	Somewhat limited Depth to saturated zone	0.03
51: Cavendish-----	75	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Very limited Unstable excavation walls	1.00	Not limited	
52: Cavendish-----	45	Very limited Low strength Slope Shrink-swell Frost action	1.00 0.96 0.50 0.50	Very limited Unstable excavation walls Slope	1.00 0.96	Somewhat limited Slope	0.96
Taney-----	40	Very limited Frost action Slope Depth to saturated zone	1.00 0.96 0.88	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.96 0.10	Somewhat limited Slope Depth to saturated zone	0.96 0.88
53: Cobbler-----	55	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Aldermant-----	35	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
54: Cobbler-----	50	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Noil-----	45	Very limited Too steep Large stones Frost action	1.00 0.03 0.50	Very limited Too steep Unstable excavation walls Large stones	1.00 1.00 0.03	Very limited Too steep	1.00
55: Cranberry-----	60	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Riswold-----	20	Very limited Too steep Frost action Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
56: Crumarine-----	95	Somewhat limited Depth to saturated zone Frost action Flooding	 0.90  0.50 0.40	Very limited Depth to saturated zone Unstable excavation walls	 1.00  1.00	Somewhat limited Depth to saturated zone	 0.90
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Very limited Shrink-swell Low strength Depth to saturated zone Frost action	 1.00 1.00 0.68  0.50	Very limited Depth to saturated zone Too clayey Unstable excavation walls	 1.00  0.04 0.10	Somewhat limited Depth to saturated zone	 0.68
59: Driscoll-----	45	Very limited Shrink-swell Low strength Too steep Depth to saturated zone Frost action	 1.00 1.00 1.00 0.68  0.50	Very limited Depth to saturated zone Too steep Too clayey Unstable excavation walls	 1.00  1.00 0.04 0.10	Very limited Too steep Depth to saturated zone	 1.00 0.68
Larkin-----	35	Very limited Frost action Low strength Too steep Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
60: Dullaxe, high elevation-----	45	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Dullaxe-----	35	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
61: Dullaxe, dry-----	60	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets	Value	Shallow excavations	Value	Lawns and landscaping	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
61: Dullaxe, wet-----	35	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
62: Dullaxe-----	50	Very limited Frost action Too steep	1.00 1.00	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep	1.00
Brodeer-----	35	Very limited Frost action Too steep	1.00 1.00	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep	1.00
63: Dullaxe-----	60	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Brodeer-----	25	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
64: Dullaxe-----	60	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Judgetown-----	35	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
65: Dullaxe-----	70	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Judgetown, moist----	25	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
66: Dullaxe-----	55	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66: Jury, moist-----	30	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
67: Dumps, wood slash---	100	Not rated		Not rated		Not rated	
68: Dworshak-----	85	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
69: Dworshak-----	80	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Brequito-----	15	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
70: Elkberry-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Elkberry, wet-----	30	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
71: Elkberry-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Dworshak-----	40	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
72: Elkridge-----	55	Very limited Too steep Shrink-swell Frost action	1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00



# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
72: Riswold-----	40	Very limited Too steep Frost action Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
73: Elkridge-----	65	Very limited Too steep Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Riswold-----	30	Very limited Too steep Frost action Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
74: Fico, dry-----	55	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Hucberit, warm-----	35	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
75: Fico-----	50	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Weitas-----	40	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
76: Flewsie, high precipitation-----	75	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
77: Flewsie, low precipitation-----	70	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Flewsie, dry-----	20	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
78: Floodwood-----	75	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
79: Floodwood, warm-----	45	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Keeler-----	40	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
80: Floodwood-----	50	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Keeler, warm-----	30	Very limited Too steep Low strength Frost action	1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
81: Floodwood-----	50	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Keeler, warm-----	30	Very limited Too steep Low strength Frost action	1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
82: Flumecreek-----	85	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
83: Flumecreek-----	65	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Stepoff-----	20	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
83: Dworshak, dry-----	15	Very limited Too steep Frost action Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
84: Fordcreek-----	70	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.06 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
85: Fordcreek-----	80	Very limited Low strength Slope Shrink-swell Frost action	 1.00 0.16 0.06 0.50	Somewhat limited Slope Unstable excavation walls	 0.16 0.10	Somewhat limited Slope	 0.16
86: Garveson, high precipitation-----	55	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Floodwood-----	30	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
87: Gramil-----	60	Very limited Ponding Depth to saturated zone Shrink-swell Frost action Low strength	 1.00 1.00 0.50 0.50 0.10	Very limited Ponding Depth to saturated zone Too clayey Unstable excavation walls	 1.00 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Lewhand-----	30	Very limited Depth to saturated zone Frost action Flooding Low strength	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Unstable excavation walls Flooding	 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	 1.00 0.60
88: Gramil-----	50	Very limited Ponding Depth to saturated zone Shrink-swell Frost action Low strength	 1.00 1.00 0.50 0.50 0.10	Very limited Ponding Depth to saturated zone Too clayey Unstable excavation walls	 1.00 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
88: Reggear-----	40	Very limited Frost action	1.00	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.28
		Low strength	1.00	Unstable excavation walls	0.10		
		Shrink-swell	0.50				
		Depth to saturated zone	0.28				
89: Grandad-----	85	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
90: Grandad, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
91: Grandad, dry-----	70	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
Grandad-----	20	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
92: Grandad-----	55	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
Rettig-----	40	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
93: Grandad, wet-----	60	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		
Rettig, wet-----	35	Very limited Too steep	1.00	Very limited Too steep	1.00	Very limited Too steep	1.00
		Frost action	1.00	Unstable excavation walls	1.00		

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
94: Grandad, dry-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Scand-----	40	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
95: Grangemont-----	60	Very limited Frost action Low strength Slope	1.00 1.00 0.84	Somewhat limited Slope Unstable excavation walls	0.84 0.10	Somewhat limited Slope	0.84
Kauder-----	35	Very limited Frost action Slope Depth to saturated zone	1.00 0.84 0.64	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.84 0.10	Somewhat limited Slope Depth to saturated zone	0.84 0.64
96: Grangemont, dry-----	50	Very limited Frost action Low strength Slope	1.00 1.00 0.84	Somewhat limited Slope Unstable excavation walls	0.84 0.10	Somewhat limited Slope	0.84
Kauder, dry-----	40	Very limited Frost action Slope Depth to saturated zone	1.00 0.84 0.64	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.84 0.10	Somewhat limited Slope Depth to saturated zone	0.84 0.64
97: Grangemont-----	60	Very limited Frost action Low strength Slope	1.00 1.00 0.84	Somewhat limited Slope Unstable excavation walls	0.84 0.10	Somewhat limited Slope	0.84
Kauder, moist-----	30	Very limited Frost action Slope Depth to saturated zone	1.00 0.84 0.64	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.84 0.10	Somewhat limited Slope Depth to saturated zone	0.84 0.64
98: Grangemont, wet-----	45	Very limited Frost action Too steep Low strength	1.00 1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
98: Riswold-----	35	Very limited Frost action Too steep Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
99: Grasshopper-----	80	Very limited Frost action Flooding Depth to saturated zone	 1.00 1.00 0.86	Very limited Depth to saturated zone Unstable excavation walls Flooding	 1.00 1.00 1.00 0.60	Somewhat limited Depth to saturated zone Flooding	 0.86 0.60
100: Gwin-----	45	Very limited Depth to hard bedrock Too steep Large stones Frost action	 1.00 1.00 1.00 0.04 0.50	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00 1.00 1.00 0.04 0.10	Very limited Depth to bedrock Too steep Droughty Large stones	 1.00 1.00 1.00 0.95
Kettenbach-----	40	Very limited Too steep Shrink-swell Large stones Frost action Depth to hard bedrock	 1.00 0.50 0.22 0.50 0.06	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00 1.00 1.00 0.22 0.10	Very limited Too steep Depth to bedrock Droughty	 1.00 0.06 0.09
101: Gwin-----	45	Very limited Depth to hard bedrock Too steep Large stones Frost action	 1.00 1.00 1.00 0.04 0.50	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00 1.00 1.00 0.04 0.10	Very limited Depth to bedrock Droughty Too steep Large stones	 1.00 1.00 1.00 0.95
Kettenbach-----	30	Very limited Too steep Shrink-swell Large stones Frost action Depth to hard bedrock	 1.00 0.50 0.22 0.50 0.06	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00 1.00 1.00 0.22 0.10	Very limited Too steep Depth to bedrock Droughty	 1.00 0.06 0.09
Keuterville-----	20	Very limited Too steep Frost action	 1.00 0.50	Very limited Unstable excavation walls Too steep	 1.00 1.00	Very limited Too steep	 1.00
102: Hildebrand-----	55	Somewhat limited Frost action	 0.50	Very limited Depth to saturated zone Unstable excavation walls	 1.00 0.10	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102: Spacecreek, dry-----	35	Very limited Frost action	1.00	Very limited Depth to saturated zone Unstable excavation walls	1.00 0.10	Not limited	
103: Hubub, wet-----	75	Very limited Too steep Frost action Low strength	1.00 1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
104: Hubub, wet-----	65	Very limited Frost action Too steep Low strength	1.00 1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Dworshak-----	30	Very limited Frost action Too steep Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep	1.00
105: Hubub-----	65	Very limited Frost action Too steep Low strength	1.00 1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Lostpete-----	20	Very limited Frost action Too steep Shrink-swell Low strength	1.00 1.00 0.50 0.22	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
106: Hucherit-----	85	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
107: Hucherit-----	40	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Vaywood, high precipitation-----	35	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
108: Hugus-----	85	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
109: Hugus-----	90	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
110: Hugus, moist-----	75	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
111: Hugus, high precipitation-----	75	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
112: Hugus, moist-----	75	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Hugus-----	15	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
113: Hugus-----	60	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Dworshak-----	35	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
114: Itzee-----	90	Not limited		Very limited Unstable excavation walls	1.00	Not limited	
115: Jacket-----	80	Very limited Shrink-swell Low strength Too steep Frost action	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
116: Jacket-----	85	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Somewhat limited Too clayey Unstable excavation walls	0.03 0.10	Not limited	



# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
117: Jacket-----	45	Very limited Too steep Shrink-swell Low strength Frost action	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10 	Very limited Too steep	 1.00
Wellsbench-----	35	Very limited Too steep Low strength Shrink-swell Large stones Frost action	 1.00 1.00 0.50 0.11 0.50	Very limited Too steep Large stones Depth to hard bedrock Unstable excavation walls	 1.00 0.11 0.99  0.10	Very limited Too steep	 1.00
118: Jacot-----	45	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Garveson-----	35	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
119: Jacot-----	45	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Garveson-----	35	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
120: Jaype-----	50	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
Revling-----	35	Very limited Frost action Too steep Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
121: Jaype, dry-----	65	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Revling, dry-----	15	Very limited Frost action Too steep Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
122: Jaype-----	50	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Statemeadow-----	25	Very limited Frost action Low strength Too steep	1.00 1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
123: Joel-----	50	Very limited Frost action Low strength Slope	1.00 1.00 0.84	Somewhat limited Slope Unstable excavation walls	0.84 0.10	Somewhat limited Slope	0.84
Setters-----	30	Very limited Depth to saturated zone Low strength Slope Frost action	1.00 1.00 0.84 0.50	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.84 0.10	Very limited Depth to saturated zone Slope	1.00 0.84
124: Johnson-----	75	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
125: Johnson-----	55	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Swayne-----	25	Very limited Too steep Shrink-swell Low strength Frost action	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
126: Johnson-----	45	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
126: Swayne-----	40	Very limited Too steep Shrink-swell Low strength Frost action	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
127: Johnson-----	50	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
Texascreek-----	35	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls Depth to soft bedrock	 1.00 1.00 0.20	Very limited Too steep Depth to bedrock	 1.00 0.20
128: Jury-----	80	Very limited Frost action Too steep	 1.00 1.00	Very limited Unstable excavation walls Too steep	 1.00 1.00	Very limited Too steep	 1.00
129: Jury-----	85	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
130: Jury, cold-----	90	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
131: Jury-----	55	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Weitas-----	35	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
132: Jury-----	60	Very limited Frost action Too steep	 1.00 1.00	Very limited Unstable excavation walls Too steep	 1.00 1.00	Very limited Too steep	 1.00
Weitas-----	30	Very limited Frost action Too steep	 1.00 1.00	Very limited Unstable excavation walls Too steep	 1.00 1.00	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
133: Kauder-----	80	Very limited Frost action Slope Depth to saturated zone	1.00 0.84 0.64	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 1.00 0.84 0.10	Somewhat limited Slope Depth to saturated zone	0.84 0.64
134: Keeler, dry-----	50	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Keeler-----	30	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
135: Keeler, moist-----	65	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Keeler-----	20	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
136: Keeler-----	55	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Aldermand-----	30	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
137: Keeler-----	50	Very limited Too steep Low strength Frost action	1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Jacot-----	30	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
138: Keeler-----	55	Very limited Too steep Frost action	1.00 0.50	Very limited Unstable excavation walls Too steep	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
138: Lado-----	20	Very limited Frost action Too steep Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
139: Kettenbach-----	40	Very limited Too steep Shrink-swell Large stones Frost action Depth to hard bedrock	 1.00 0.50 0.22 0.50 0.06	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00  1.00 0.22 0.10	Very limited Too steep Depth to bedrock Droughty	 1.00 0.06 0.09
Gwin-----	35	Very limited Depth to hard bedrock Too steep Large stones Frost action	 1.00  1.00 0.04 0.50	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00  1.00 0.04 0.10	Very limited Depth to bedrock Too steep Droughty Large stones	 1.00 1.00 1.00 0.95
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140: Kettenbach-----	45	Very limited Too steep Shrink-swell Large stones Frost action Depth to hard bedrock	 1.00 0.50 0.22 0.50 0.06	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00  1.00 0.22 0.10	Very limited Too steep Depth to bedrock Droughty	 1.00 0.06 0.09
Keuterville-----	30	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
141: Keuterville-----	80	Very limited Too steep Frost action	 1.00 0.50	Very limited Unstable excavation walls Too steep	 1.00 1.00	Very limited Too steep	 1.00
142: Keuterville-----	65	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
143: Keuterville-----	65	Very limited Too steep Low strength Frost action	 1.00 0.22 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep Gravel Droughty	 1.00 0.59 0.02
Rock outcrop-----	20	Not rated		Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets	Shallow excavations	Lawns and landscaping
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
144: Klickson-----	85	Very limited Too steep Frost action	Very limited Too steep Unstable excavation walls	Very limited Too steep
		1.00	1.00	1.00
		0.50	1.00	
145: Klickson-----	70	Very limited Too steep Frost action	Very limited Too steep Unstable excavation walls	Very limited Too steep
		1.00	1.00	1.00
		0.50	1.00	
146: Klickson-----	50	Very limited Too steep Frost action	Very limited Too steep Unstable excavation walls	Very limited Too steep
		1.00	1.00	1.00
		0.50	1.00	
Agatha-----	35	Very limited Too steep Large stones Frost action	Very limited Too steep Unstable excavation walls Large stones	Very limited Too steep
		1.00	1.00	1.00
		0.16	1.00	
		0.50	0.16	
147: Klickson-----	50	Very limited Too steep Frost action	Very limited Too steep Unstable excavation walls	Very limited Too steep
		1.00	1.00	1.00
		0.50	1.00	
Kettenbach-----	30	Very limited Too steep Shrink-swell Large stones Frost action Depth to hard bedrock	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	Very limited Too steep Depth to bedrock Droughty
		1.00	1.00	1.00
		0.50		0.06
		0.22	1.00	0.09
		0.50	0.22	
		0.06	0.10	
148: Klickson-----	50	Very limited Too steep Frost action	Very limited Too steep Unstable excavation walls	Very limited Too steep
		1.00	1.00	1.00
		0.50	1.00	
Rock outcrop-----	20	Not rated	Not rated	Not rated
Kettenbach-----	30	Very limited Too steep Shrink-swell Large stones Frost action Depth to hard bedrock	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	Very limited Too steep Depth to bedrock Droughty
		1.00	1.00	1.00
		0.50		0.06
		0.22	1.00	0.09
		0.50	0.22	
		0.06	0.10	
149: Konkol-----	45	Very limited Low strength Too steep Frost action	Very limited Too steep Unstable excavation walls	Very limited Too steep
		1.00	1.00	1.00
		1.00	0.10	
		0.50		

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149: Revling-----	25	Very limited Frost action Too steep Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
150: Kooskia-----	80	Very limited Depth to saturated zone Shrink-swell Low strength Too steep Frost action	 1.00  1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Too steep Too clayey Unstable excavation walls	 1.00  1.00 0.03 0.10	Very limited Depth to saturated zone Too steep	 1.00  1.00
151: Kooskia-----	80	Very limited Depth to saturated zone Shrink-swell Low strength Frost action	 1.00  1.00 1.00 0.50	Very limited Depth to saturated zone Too clayey Unstable excavation walls	 1.00  0.03 0.10	Very limited Depth to saturated zone	 1.00
152: Kruse-----	85	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
153: Kruse-----	75	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
154: Kruse-----	50	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Aldermant-----	40	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
155: Kruse-----	50	Very limited Too steep Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
155: Aldermant-----	35	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
156: Kruse-----	55	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
McCrosket, dry-----	40	Very limited Too steep Large stones Frost action	1.00 0.84 0.50	Very limited Too steep Large stones Unstable excavation walls	1.00 0.84 0.10	Very limited Too steep	1.00
157: Kruse-----	70	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Noil-----	20	Very limited Too steep Large stones Frost action	1.00 0.03 0.50	Very limited Too steep Unstable excavation walls Large stones	1.00 1.00 0.03	Very limited Too steep	1.00
158: Kruse-----	45	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Teakean-----	40	Very limited Too steep Low strength Shrink-swell Frost action Depth to saturated zone	1.00 0.78 0.50 0.50 0.43	Very limited Too steep Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Very limited Too steep Depth to saturated zone	0.43
159: Larkin-----	50	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00



# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
159: Driscoll-----	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	1.00	Depth to saturated	1.00	Depth to saturated	0.68
		Low strength	1.00	zone		zone	
		Depth to saturated	0.68	Too clayey	0.04		
		zone		Unstable	0.10		
		Frost action	0.50	excavation walls			
160: Lebaron-----	45	Very limited		Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
		Frost action	1.00	Unstable	0.10		
		Low strength	1.00	excavation walls			
		Flooding	0.40				
Latahco-----	40	Very limited		Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Unstable	0.10		
				excavation walls			
161: Lewhand-----	65	Very limited		Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
		Frost action	1.00	Unstable	1.00	Flooding	0.60
		Flooding	1.00	excavation walls			
		Low strength	1.00	Flooding	0.60		
Burntcreek-----	20	Very limited		Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
		Flooding	1.00	Flooding	0.60	Flooding	0.60
		Low strength	1.00	Unstable	0.10		
		Frost action	0.50	excavation walls			
162: Lewhand-----	80	Very limited		Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00	Depth to saturated	1.00
		zone		zone		zone	
		Frost action	1.00	Unstable	1.00	Flooding	0.60
		Flooding	1.00	excavation walls			
		Low strength	1.00	Flooding	0.60		
Teneb-----	15	Very limited		Very limited		Very limited	
		Depth to saturated	1.00	Depth to saturated	1.00	Flooding	1.00
		zone		zone		Depth to saturated	1.00
		Frost action	1.00	Flooding	0.80	zone	
		Flooding	1.00	Unstable	0.10		
		Low strength	1.00	excavation walls			
		Shrink-swell	0.50				
163: Longbar-----	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Shrink-swell	0.50	Unstable	1.00		
		Frost action	0.50	excavation walls			

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
163: Bigtalk-----	35	Very limited Too steep Shrink-swell Frost action	1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
164: Longbar-----	55	Very limited Too steep Shrink-swell Frost action	1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Bigtalk-----	35	Very limited Too steep Shrink-swell Frost action	1.00 0.50 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
165: Longpen-----	75	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.06	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
166: Longpen-----	60	Very limited Frost action Low strength Slope Shrink-swell	1.00 1.00 0.84 0.06	Somewhat limited Slope Unstable excavation walls	0.84 0.10	Somewhat limited Slope	0.84
167: Meland-----	50	Very limited Low strength Slope Shrink-swell Frost action Depth to hard bedrock	1.00 0.84 0.50 0.50 0.10	Very limited Depth to hard bedrock Unstable excavation walls Slope	1.00 1.00 0.84	Somewhat limited Slope Depth to bedrock	0.84 0.10
Jacket-----	40	Very limited Low strength Slope Shrink-swell Frost action	1.00 0.84 0.50 0.50	Somewhat limited Slope Too clayey Unstable excavation walls	0.84 0.03 0.10	Somewhat limited Slope	0.84
168: Meland-----	55	Very limited Too steep Low strength Shrink-swell Frost action Depth to hard bedrock	1.00 1.00 0.50 0.50 0.10	Very limited Depth to hard bedrock Unstable excavation walls Too steep	1.00 1.00 1.00	Very limited Too steep Depth to bedrock	1.00 0.10
Keuterville-----	30	Very limited Too steep Low strength Frost action	1.00 0.22 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep Gravel Droughty	1.00 0.59 0.02

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
169: Mushel-----	60	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Brodeer-----	30	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
170: Mushel-----	50	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Dullaxe-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
171: Nakarna, high precipitation-----	75	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
172: Nakarna, high precipitation-----	75	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
173: Nakarna-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Nakarna, warm-----	35	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
174: Narnett-----	60	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Jury-----	20	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
175: Neva-----	80	Very limited Too steep Low strength Frost action	 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
176: Newlig-----	85	Very limited Low strength Slope Shrink-swell Frost action	 1.00 0.84 0.50 0.50	Somewhat limited Slope Unstable excavation walls	 0.84 0.10	Somewhat limited Slope	 0.84
177: Noil-----	45	Very limited Too steep Large stones Frost action	 1.00 0.03 0.50	Very limited Too steep Unstable excavation walls Large stones	 1.00 1.00 0.03	Very limited Too steep	 1.00
Keeler-----	30	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
178: Noil-----	70	Very limited Too steep Large stones Frost action	 1.00 0.03 0.50	Very limited Too steep Unstable excavation walls Large stones	 1.00 1.00 0.03	Very limited Too steep	 1.00
Bouldercreek, warm--	15	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179: Norwidge, moist-----	50	Very limited Frost action Too steep Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
Threebear, moist----	45	Very limited Frost action Low strength Too steep Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 0.50 0.64	Very limited Depth to saturated zone Too steep Unstable excavation walls	 1.00	Very limited Too steep Depth to saturated zone	 1.00 0.64

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
180: Odonnell-----	65	Very limited Frost action Too steep Low strength Depth to saturated zone	 1.00 1.00 1.00 0.64	Very limited Depth to saturated zone Too steep Unstable excavation walls	 1.00  1.00 0.10	Very limited Too steep Depth to saturated zone	 1.00 0.64
Grandad-----	15	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	1.00
181: Odonnell-----	75	Very limited Too steep Frost action Low strength Depth to saturated zone	 1.00 1.00 1.00 0.64	Very limited Too steep Depth to saturated zone Unstable excavation walls	 1.00 1.00  0.10	Very limited Too steep Depth to saturated zone	 1.00 0.64
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Depth to saturated zone Flooding	 1.00  1.00	Very limited Depth to saturated zone Unstable excavation walls Flooding	 1.00  1.00 0.60	Very limited Depth to saturated zone Flooding	 1.00 0.60
Itzee-----	15	Not limited		Very limited Unstable excavation walls	1.00	Not limited	
183: Pits, quarry-----	100	Not rated		Not rated		Not rated	
184: Placer-----	40	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	1.00
Dowper-----	30	Very limited Too steep Frost action Shrink-swell Low strength	 1.00 1.00 0.50 0.22	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	1.00
Grangemont-----	15	Very limited Too steep Frost action Low strength	 1.00 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
185: Poorman, dry-----	70	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
186: Poorman, dry-----	60	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Poorman-----	30	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
187: Poorman-----	55	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Grandad-----	35	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
188: Poorman-----	50	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Grandad-----	40	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
189: Poorman-----	75	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Grandad, dry-----	20	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
190: Poorman-----	40	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Grandad, dry-----	35	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
191: Reggear-----	55	Very limited Frost action Low strength Slope Shrink-swell Depth to saturated zone	1.00 1.00 0.84 0.50 0.28	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 1.00 0.84 0.10	Somewhat limited Slope Depth to saturated zone	0.84 0.28
Kauder-----	25	Very limited Frost action Slope Depth to saturated zone	1.00 0.84 0.64	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 1.00 0.84 0.10	Somewhat limited Slope Depth to saturated zone	0.84 0.64
192: Reggear-----	50	Very limited Frost action Low strength Shrink-swell Slope Depth to saturated zone	1.00 1.00 0.50 0.16 0.28	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 1.00 0.16 0.10	Somewhat limited Slope Depth to saturated zone	0.16 0.28
Seddown-----	30	Very limited Low strength Shrink-swell Slope Frost action	1.00 0.50 0.16 0.50	Very limited Unstable excavation walls Slope Depth to hard bedrock	1.00 1.00 0.16 0.88	Somewhat limited Slope	0.16
193: Rettig, high elevation-----	80	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
194: Rettig-----	80	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
195: Rettig, cold-----	90	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
196: Rettig, cool-----	50	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
196: Rettig, dry-----	40	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
197: Rettig-----	45	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Grandad-----	30	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
198: Rettig, warm, dry---	60	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Township-----	25	Very limited Too steep Frost action Large stones	1.00 1.00 0.28	Very limited Too steep Large stones Unstable excavation walls	1.00 0.28 0.10	Very limited Too steep	1.00
199: Rettig-----	40	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Township, wet-----	25	Very limited Too steep Frost action Large stones	1.00 1.00 0.28	Very limited Too steep Large stones Unstable excavation walls	1.00 0.28 0.10	Very limited Too steep	1.00
Stepoff-----	15	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
200: Riswold-----	50	Very limited Frost action Too steep Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Cranberry-----	45	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.16	Somewhat limited Slope Unstable excavation walls	0.16 0.10	Somewhat limited Slope	0.16



# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
201:							
Riswold-----	45	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable	0.10		
		Low strength	0.78	excavation walls			
		Shrink-swell	0.50				
Grangemont-----	40	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable	0.10		
		Low strength	1.00	excavation walls			
202:							
Rock outcrop-----	35	Not rated		Not rated		Not rated	
Whiskeycreek-----	30	Very limited		Very limited		Very limited	
		Depth to hard	1.00	Depth to hard	1.00	Depth to bedrock	1.00
		bedrock		bedrock		Too steep	1.00
		Too steep	1.00	Too steep	1.00	Droughty	1.00
				Unstable	0.10		
				excavation walls			
Texascreek, dry-----	25	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	0.50	Unstable	1.00	Depth to bedrock	0.20
				excavation walls			
				Depth to soft	0.20		
				bedrock			
203:							
Scaler-----	85	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable	1.00		
		Low strength	0.22	excavation walls			
204:							
Scaler-----	60	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable	1.00		
		Low strength	0.22	excavation walls			
Grandad-----	20	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable	1.00		
				excavation walls			
205:							
Scaler-----	60	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable	1.00		
		Low strength	0.22	excavation walls			
Grangemont-----	30	Very limited		Very limited		Very limited	
		Too steep	1.00	Too steep	1.00	Too steep	1.00
		Frost action	1.00	Unstable	0.10		
		Low strength	1.00	excavation walls			

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
206: Scand-----	65	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
Scaler-----	15	Very limited Too steep Frost action Low strength	1.00 1.00 0.22	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
207: Seddow-----	75	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls Depth to hard bedrock	1.00 1.00 0.88	Very limited Too steep	1.00
208: Seddow-----	85	Very limited Too steep Low strength Shrink-swell Frost action	1.00 1.00 0.50 0.50	Very limited Too steep Unstable excavation walls Depth to hard bedrock	1.00 1.00 0.88	Very limited Too steep	1.00
209: Seddow-----	80	Very limited Low strength Shrink-swell Slope Frost action	1.00 0.50 0.16 0.50	Very limited Unstable excavation walls Slope Depth to hard bedrock	1.00 0.16 0.88	Somewhat limited Slope	0.16
210: Setters-----	80	Very limited Depth to saturated zone Low strength Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Unstable excavation walls	1.00 0.10	Very limited Depth to saturated zone	1.00
211: Shattuck-----	90	Very limited Too steep Frost action Low strength	1.00 1.00 0.22	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
212: Shattuck-----	90	Very limited Too steep Frost action Low strength	1.00 1.00 0.22	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00
213: Shattuck, moist-----	90	Very limited Too steep Frost action Low strength	1.00 1.00 0.22	Very limited Too steep Unstable excavation walls	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
214: Shattuck, moist-----	50	Very limited Too steep Frost action Low strength	 1.00 1.00 0.22	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Dworshak, moist-----	40	Very limited Too steep Frost action Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
215: Shattuck-----	60	Very limited Too steep Frost action Low strength	 1.00 1.00 0.22	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Dworshak-----	35	Very limited Too steep Frost action Low strength Shrink-swell	 1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
216: Sly-----	80	Very limited Low strength Shrink-swell Slope Frost action	 1.00 0.50 0.16 0.50	Somewhat limited Slope Unstable excavation walls	 0.16 0.10	Somewhat limited Slope	 0.16
Wilkins-----	15	Very limited Depth to saturated zone Shrink-swell Flooding Low strength Frost action	 1.00  1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Too clayey Unstable excavation walls	 1.00  0.60 0.12 0.10	Very limited Depth to saturated zone Flooding	 1.00  0.60
217: Southwick-----	85	Very limited Frost action Low strength Shrink-swell Depth to saturated zone	 1.00 1.00 0.50 0.75	Very limited Depth to saturated zone Unstable excavation walls	 1.00  0.10	Somewhat limited Depth to saturated zone	 0.75
218: Southwick-----	45	Very limited Frost action Low strength Too steep Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 0.50 0.75	Very limited Depth to saturated zone Too steep Unstable excavation walls	 1.00  1.00 0.10	Very limited Too steep Depth to saturated zone	 1.00 0.75

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
218: Larkin-----	40	Very limited Frost action Low strength Too steep Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
219: Statemeadow-----	65	Very limited Frost action Low strength Slope	 1.00 1.00 0.16	Somewhat limited Slope Unstable excavation walls	 0.16 0.10	Somewhat limited Slope	 0.16
Reggear-----	25	Very limited Frost action Low strength Shrink-swell Slope Depth to saturated zone	 1.00 1.00 0.50 0.16 0.28	Very limited Depth to saturated zone Slope Unstable excavation walls	 1.00  0.16 0.10	Somewhat limited Slope Depth to saturated zone	 0.16 0.28
220: Swayne-----	85	Very limited Shrink-swell Low strength Too steep Frost action	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
221: Taney-----	80	Very limited Frost action Depth to saturated zone	 1.00 0.88	Very limited Depth to saturated zone Unstable excavation walls	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.88
222: Taney-----	50	Very limited Frost action Low strength Too steep Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 0.50 0.03	Very limited Depth to saturated zone Too steep Too clayey Unstable excavation walls	 1.00  1.00 0.12 0.10	Very limited Too steep Depth to saturated zone	 1.00 0.03
Joel-----	35	Very limited Frost action Low strength Too steep Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
223: Taney-----	65	Very limited Too steep Frost action Depth to saturated zone	 1.00 1.00 0.88	Very limited Too steep Depth to saturated zone Unstable excavation walls	 1.00 1.00 0.10	Very limited Too steep Depth to saturated zone	 1.00 0.88

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223: McCrosket-----	25	Very limited Too steep Large stones Frost action	1.00 0.84 0.50	Very limited Too steep Large stones Unstable excavation walls	1.00 0.84 0.10	Very limited Too steep	1.00
224: Taney-----	55	Very limited Frost action Depth to saturated zone	1.00 0.88	Very limited Depth to saturated zone Unstable excavation walls	1.00 0.10	Somewhat limited Depth to saturated zone	0.88
Setters-----	35	Very limited Depth to saturated zone Low strength Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Unstable excavation walls	1.00 0.10	Very limited Depth to saturated zone	1.00
225: Taney-----	40	Very limited Frost action Slope Depth to saturated zone	1.00 0.96 0.88	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.96 0.10	Somewhat limited Slope Depth to saturated zone	0.96 0.88
Setters-----	40	Very limited Depth to saturated zone Low strength Slope Frost action	1.00 1.00 0.96 0.50	Very limited Depth to saturated zone Slope Unstable excavation walls	1.00 0.96 0.10	Very limited Depth to saturated zone Slope	1.00 0.96
226: Teakean-----	80	Very limited Too steep Low strength Shrink-swell Frost action Depth to saturated zone	1.00 0.78 0.50 0.50 0.43	Very limited Too steep Depth to saturated zone Unstable excavation walls	1.00 1.00 1.00	Very limited Too steep Depth to saturated zone	1.00 0.43
227: Teneb-----	85	Very limited Depth to saturated zone Frost action Flooding Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Unstable excavation walls	1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	1.00 1.00
228: Texascreek-----	55	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls Depth to soft bedrock	1.00 1.00 0.20	Very limited Too steep Depth to bedrock	1.00 0.20

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
228: Rock outcrop-----	25	Not rated		Not rated		Not rated	
229: Texascreek, dry-----	45	Very limited Too steep Frost action	1.00 0.50	Very limited Too steep Unstable excavation walls Depth to soft bedrock	1.00 1.00 0.20	Very limited Too steep Depth to bedrock	1.00 0.20
Whiskeycreek-----	35	Very limited Depth to hard bedrock Too steep	1.00 1.00	Very limited Depth to hard bedrock Too steep Unstable excavation walls	1.00 1.00 0.10	Very limited Depth to bedrock Too steep Droughty	1.00 1.00 1.00
230: Norwidge-----	45	Very limited Frost action Too steep Low strength Shrink-swell	1.00 1.00 1.00 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Threebear-----	45	Very limited Frost action Low strength Too steep Shrink-swell Depth to saturated zone	1.00 1.00 1.00 0.50 0.68	Very limited Depth to saturated zone Too steep Unstable excavation walls	1.00 1.00 0.10	Very limited Too steep Depth to saturated zone	1.00 0.68
231: Tomodo-----	80	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
232: Tomodo-----	60	Very limited Too steep Frost action	1.00 1.00	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
Lado-----	15	Very limited Too steep Frost action Low strength Shrink-swell	1.00 1.00 0.78 0.50	Very limited Too steep Unstable excavation walls	1.00 0.10	Very limited Too steep	1.00
233: Township-----	55	Very limited Too steep Frost action Large stones	1.00 1.00 0.28	Very limited Too steep Large stones Unstable excavation walls	1.00 0.28 0.10	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
233: Rettig-----	25	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
234: Township-----	65	Very limited Too steep Frost action Large stones	 1.00 1.00 0.28	Very limited Too steep Large stones Unstable excavation walls	 1.00 0.28 0.10	Very limited Too steep	 1.00
Rettig-----	25	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
235: Township, dry-----	45	Very limited Too steep Frost action Large stones	 1.00 1.00 0.28	Very limited Too steep Large stones Unstable excavation walls	 1.00 0.28 0.10	Very limited Too steep	 1.00
Rettig, low precipitation-----	25	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Nakarna, dry-----	20	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
236: Trappercreek-----	50	Very limited Frost action Low strength Shrink-swell Slope	 1.00 1.00 0.50 0.16	Somewhat limited Slope Unstable excavation walls	 0.16 0.10	Somewhat limited Slope	 0.16
Narnett-----	35	Very limited Frost action Low strength Shrink-swell Slope	 1.00 1.00 0.50 0.16	Very limited Unstable excavation walls Slope	 1.00 0.16	Somewhat limited Slope	 0.16
237: Uvi-----	65	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 0.10	Very limited Too steep	 1.00
238: Uvi-----	90	Very limited Too steep Frost action	 1.00 0.50	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00

# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
239: Vaywood, high precipitation-----	60	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Vaywood, dry-----	30	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
240: Vaywood-----	85	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
241: Vaywood-----	65	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
Handoff-----	20	Very limited Too steep Frost action	 1.00 1.00	Very limited Too steep Unstable excavation walls	 1.00 1.00	Very limited Too steep	 1.00
242: Water-----	100	Not rated		Not rated		Not rated	
243: Wellsbench-----	80	Very limited Low strength Shrink-swell Large stones Frost action	 1.00 0.50 0.11 0.50	Somewhat limited Large stones Depth to hard bedrock Unstable excavation walls	 0.11 0.99 0.10	Not limited	
244: Wellsbench-----	50	Very limited Too steep Low strength Shrink-swell Large stones Frost action	 1.00 1.00 0.50 0.11 0.50	Very limited Too steep Large stones Depth to hard bedrock Unstable excavation walls	 1.00 0.11 0.99 0.10	Very limited Too steep	 1.00
Lacy-----	30	Very limited Depth to hard bedrock Too steep Large stones Shrink-swell Frost action	 1.00  1.00 0.82 0.50 0.50	Very limited Depth to hard bedrock Too steep Large stones Unstable excavation walls	 1.00  1.00 0.82 0.50	Very limited Depth to bedrock Too steep Droughty	 1.00 1.00 1.00



# Soil Survey of Clearwater Area, Idaho

Table 21.—Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
245: Wilkins-----	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Too clayey	0.12		
		Low strength	1.00	Unstable	0.10		
		Frost action	0.50	excavation walls			

# Soil Survey of Clearwater Area, Idaho

Table 22.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Too steep Slow water movement Depth to bedrock Large stones	 1.00 0.50  0.27 0.16	Very limited Slope Seepage	 1.00 0.50	Very limited Too steep Large stones Too clayey Gravel content	 1.00 0.60 0.50 0.01
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Very limited Too steep Slow water movement Depth to bedrock Large stones	 1.00 0.50  0.27 0.16	Very limited Slope Seepage	 1.00 0.50	Very limited Too steep Large stones Too clayey Gravel content	 1.00 0.60 0.50 0.01
3: Agatha-----	75	Very limited Too steep Slow water movement Depth to bedrock Large stones	 1.00 0.50  0.27 0.16	Very limited Slope Seepage	 1.00 0.50	Very limited Too steep Large stones Too clayey Gravel content	 1.00 0.60 0.50 0.01
4: Ahsahka-----	45	Very limited Slow water movement Too steep	 1.00  1.00	Very limited Slope Seepage	 1.00 0.32	Very limited Too steep Too clayey Hard to compact	 1.00 1.00 1.00
Fordcreek-----	40	Very limited Too steep Depth to bedrock Slow water movement	 1.00 0.99 0.72	Very limited Slope Seepage Depth to soft bedrock	 1.00 0.27 0.98	Very limited Too steep Depth to bedrock Too clayey	 1.00 0.98 0.50
5: Ahsahka-----	50	Very limited Slow water movement Too steep	 1.00  1.00	Very limited Slope Seepage	 1.00 0.32	Very limited Too steep Too clayey Hard to compact	 1.00 1.00 1.00
Whiskeycreek-----	30	Very limited Depth to bedrock Too steep Seepage, bottom layer	 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	 1.00  1.00 1.00	Very limited Too steep Depth to bedrock Seepage Too sandy	 1.00 1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6: Aldermant-----	85	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
7: Aldermant-----	90	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
8: Aldermant, dry-----	75	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
9: Aquandic Cryaquepts	90	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00
10: Aquandic Endoaquepts	60	Very limited Flooding Depth to saturated zone Slow water movement Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone	1.00
Aquandic Dystrudepts	20	Very limited Flooding Depth to saturated zone Slow water movement Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage Slope	1.00 1.00 1.00 0.08	Very limited Depth to saturated zone Gravel content Seepage	1.00 1.00 0.21
11: Bandmill, dry-----	40	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.92	Very limited Too steep Too clayey	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
11: Grangemont-----	30	Somewhat limited Slope Slow water movement	0.84 0.79	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope	0.84
Bargamin-----	25	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
12: Bandmill-----	40	Somewhat limited Slope Slow water movement	0.63 0.50	Very limited Slope Seepage	1.00 0.92	Somewhat limited Slope Too clayey	0.63 0.50
Riswold-----	30	Very limited Slow water movement Slope	1.00 0.63	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope	0.63
13: Berthahill, moist---	75	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Large stones	1.00 0.31
Handoff-----	15	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
14: Berthahill-----	70	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Large stones	1.00 0.31
Handoff-----	20	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
15: Berthahill-----	65	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Large stones	1.00 0.31
Shattuck-----	15	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50

Soil Survey of Clearwater Area, Idaho

Table 22.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16: Bigtalk, cool-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Bigtalk, wet-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
17: Bigtalk-----	80	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
18: Bigtalk, cool-----	50	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Floodwood, cool-----	40	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
19: Bigtalk, cool-----	75	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Keeler, cool-----	20	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
20: Bouldercreek, moist	85	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.50 0.04

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21: Bouldercreek-----	75	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Large stones Gravel content	1.00 0.50 0.04 0.31
22: Bouldercreek-----	75	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Large stones Gravel content	1.00 0.50 0.04 0.31
23: Bouldercreek, moist	75	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.50 0.04
Brodeer-----	15	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
24: Bouldercreek-----	65	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.50 0.04
Brodeer-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
25: Bouldercreek-----	55	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.50 0.04
Judgetown-----	25	Very limited Too steep Seepage, bottom layer Depth to bedrock	1.00 1.00 0.69	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.26	Very limited Too steep Seepage Depth to bedrock Too sandy	1.00 1.00 0.26 0.50

Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
26: Bouldercreek, high precipitation-----	50	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Large stones Gravel content	1.00 0.50 0.04 0.31
Marblecreek-----	30	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Large stones Gravel content	1.00 0.50 0.06 0.52
27: Bouldercreek, cool, dry-----	70	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.50 0.04
Rettig, cool-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
28: Brequito, dry-----	65	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
29: Brequito-----	45	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Grangemont-----	40	Very limited Too steep Slow water movement	1.00 0.79	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
30: Brequito-----	45	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Lado, dry-----	35	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Too clayey	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31: Brequito-----	60	Somewhat limited Slow water movement Slope	0.72 0.16	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope	0.16
Lado, dry-----	25	Somewhat limited Slow water movement Slope	0.72 0.16	Very limited Seepage Slope	1.00 1.00	Somewhat limited Slope Too clayey	0.16 0.50
32: Brequito-----	50	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Mushel-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
33: Brequito-----	50	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Mushel-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
34: Brodeer, dry-----	55	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Brodeer-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
35: Brodeer-----	45	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00



# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35: Mushel-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
36: Brodeer, warm-----	45	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Mushel, dry-----	30	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
37: Brodeer-----	65	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Bouldercreek-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.50 0.04
38: Brodeer-----	50	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Flewsie, dry-----	40	Very limited Too steep Slow water movement	1.00 0.98	Very limited Slope Seepage	1.00 0.18	Very limited Too steep Too sandy	1.00 0.50
39: Brodeer-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
39: Lostpete-----	35	Very limited Too steep Slow water movement	1.00 0.82	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
40: Brodeer, moist-----	55	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Lostpete, moist-----	30	Very limited Too steep Slow water movement	1.00 0.82	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
41: Brodeer, dry-----	50	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Mushel-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
42: Brodeer-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Mushel-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
43: Burntcreek-----	80	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44: Campra-----	80	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Gravel content	1.00 1.00
45: Campra-----	45	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Gravel content Too steep	1.00 1.00
Sly-----	40	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.32	Very limited Too steep Too clayey	1.00 0.50
46: Carlinton-----	80	Very limited Depth to saturated zone Slow water movement Too steep	1.00  1.00 1.00	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone Too clayey	1.00 1.00 0.50
47: Carlinton-----	85	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00 0.63	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Slope Too clayey	1.00  0.63 0.50
48: Carlinton-----	50	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00 0.16	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Slope Too clayey	1.00  0.16 0.50
Kruse-----	35	Very limited Slow water movement Too steep Seepage, bottom layer	1.00  1.00 1.00	Very limited Seepage Slope	1.00 1.00	Very limited Too steep Too clayey	1.00 0.50
49: Carlinton-----	55	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00 0.04	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Slope Too clayey	1.00  0.04 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
49: Seddow-----	35	Somewhat limited Depth to bedrock Slow water movement Slope	0.96 0.72  0.04	Very limited Slope Seepage Depth to hard bedrock	1.00 0.50 0.88	Somewhat limited Depth to bedrock Slope	0.88 0.04
50: Caseycreek-----	80	Very limited Depth to saturated zone Slow water movement	1.00  0.68	Very limited Depth to saturated zone Seepage Slope	1.00  0.50 0.08	Somewhat limited Depth to saturated zone	0.68
51: Cavendish-----	75	Very limited Slow water movement Depth to bedrock	1.00  0.98	Somewhat limited Slope Depth to soft bedrock	0.68 0.93	Somewhat limited Depth to bedrock Too clayey	0.94 0.50
52: Cavendish-----	45	Very limited Slow water movement Depth to bedrock Slope	1.00  0.98 0.96	Very limited Slope Depth to soft bedrock	1.00 0.93	Somewhat limited Slope Depth to bedrock Too clayey	0.96 0.94 0.50
Taney-----	40	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00 0.96	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Slope Too clayey	1.00  0.96 0.50
53: Cobbler-----	55	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.43
Aldermand-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00  0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
54: Cobbler-----	50	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.43
Noil-----	45	Very limited Too steep Seepage, bottom layer Depth to bedrock Large stones	1.00 1.00  0.98 0.03	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.93	Very limited Too steep Depth to bedrock Seepage Large stones Gravel content	1.00 0.94 0.50 0.04 0.27

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Cranberry-----	60	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Riswold-----	20	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
56: Crumarine-----	95	Very limited Depth to saturated zone Seepage, bottom layer Flooding	1.00 1.00 0.40	Very limited Seepage Depth to saturated zone Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Seepage	1.00 0.50
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.99	Very limited Too clayey Hard to compact Depth to saturated zone	1.00 1.00 1.00
59: Driscoll-----	45	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.99	Very limited Too clayey Hard to compact Too steep Depth to saturated zone	1.00 1.00 1.00 1.00
Larkin-----	35	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
60: Dullaxe, high elevation-----	45	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
Dullaxe-----	35	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
61: Dullaxe, dry-----	60	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61: Dullaxe, wet-----	35	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
62: Dullaxe-----	50	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
Brodeer-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
63: Dullaxe-----	60	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
Brodeer-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
64: Dullaxe-----	60	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
Judgetown-----	35	Very limited Too steep Seepage, bottom layer Depth to bedrock	1.00 1.00 0.69	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.26	Very limited Too steep Seepage Depth to bedrock Too sandy	1.00 1.00 0.26 0.50
65: Dullaxe-----	70	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
Judgetown, moist----	25	Very limited Too steep Seepage, bottom layer Depth to bedrock	1.00 1.00 0.69	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.26	Very limited Too steep Seepage Depth to bedrock Too sandy	1.00 1.00 0.26 0.50

Soil Survey of Clearwater Area, Idaho

Table 22.--Sanitary Facilities--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66: Dullaxe-----	55	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
Jury, moist-----	30	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
67: Dumps, wood slash---	100	Not rated		Not rated		Not rated	
68: Dworshak-----	85	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
69: Dworshak-----	80	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Brequito-----	15	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
70: Elkberry-----	45	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Elkberry, wet-----	30	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
71: Elkberry-----	45	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Dworshak-----	40	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
72: Elkridge-----	55	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Gravel content	1.00 0.64

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
72: Riswold-----	40	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
73: Elkridge-----	65	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Gravel content	1.00 0.64
Riswold-----	30	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
74: Fico, dry-----	55	Very limited Too steep Seepage, bottom layer Depth to bedrock	1.00 1.00 0.47	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.05	Very limited Too steep Seepage Depth to bedrock Too sandy	1.00 1.00 0.05 0.50
Hucherit, warm-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 0.50 0.50
75: Fico-----	50	Very limited Too steep Seepage, bottom layer Depth to bedrock	1.00 1.00 0.47	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.05	Very limited Too steep Seepage Depth to bedrock Too sandy	1.00 1.00 0.05 0.50
Weitas-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
76: Flewsie, high precipitation-----	75	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
77: Flewsie, low precipitation-----	70	Very limited Too steep Slow water movement	1.00 0.98	Very limited Slope Seepage	1.00 0.18	Very limited Too steep Too sandy	1.00 0.50



# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
77: Flewsie, dry-----	20	Very limited Too steep Slow water movement	1.00 0.98	Very limited Slope Seepage	1.00 0.18	Very limited Too steep Too sandy	1.00 0.50
78: Floodwood-----	75	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
79: Floodwood, warm-----	45	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Keeler-----	40	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
80: Floodwood-----	50	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Keeler, warm-----	30	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
81: Floodwood-----	50	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Keeler, warm-----	30	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
82: Flumecreek-----	85	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Large stones Seepage	1.00 0.82 0.50
83: Flumecreek-----	65	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Large stones Seepage	1.00 0.82 0.50
Stepoff-----	20	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Dworshak, dry-----	15	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
84: Fordcreek-----	70	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.99 0.72	Very limited Slope Seepage Depth to soft bedrock	1.00 0.27 0.98	Very limited Too steep Depth to bedrock Too clayey	1.00 0.98 0.50
85: Fordcreek-----	80	Somewhat limited Depth to bedrock Slow water movement Slope	0.99 0.72 0.16	Very limited Slope Seepage Depth to soft bedrock	1.00 0.27 0.98	Somewhat limited Depth to bedrock Slope Too clayey	0.98 0.16 0.50
86: Garveson, high precipitation-----	55	Very limited Too steep Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy Gravel content	1.00 1.00 1.00 0.51
Floodwood-----	30	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87: Gramil-----	60	Very limited Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 0.50 0.50
Lewhand-----	30	Very limited Flooding Depth to saturated zone Slow water movement Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00
88: Gramil-----	50	Very limited Ponding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Seepage Slope	1.00 1.00 0.50 0.08	Very limited Ponding Depth to saturated zone Too clayey Hard to compact	1.00 1.00 0.50 0.50
Reggear-----	40	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Somewhat limited Seepage Slope Depth to saturated zone	0.50 0.18 0.83	Somewhat limited Depth to saturated zone	0.91
89: Grandad-----	85	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
90: Grandad, dry-----	70	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Grandad-----	20	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
91: Grandad, dry-----	70	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Grandad-----	20	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
92: Grandad-----	55	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Rettig-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
93: Grandad, wet-----	60	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Rettig, wet-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
94: Grandad, dry-----	45	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Scand-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
95: Grangemont-----	60	Somewhat limited Slope Slow water movement	0.84 0.79	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope	0.84
Kauder-----	35	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.84	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Somewhat limited Slope Depth to saturated zone Too clayey	0.84 0.99 0.50
96: Grangemont, dry-----	50	Somewhat limited Slope Slow water movement	0.84 0.79	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope	0.84

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
96: Kauder, dry-----	40	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00  0.84	Very limited Depth to saturated zone Slope Seepage	1.00  1.00 0.50	Somewhat limited Slope Depth to saturated zone Too clayey	0.84  0.99  0.50
97: Grangemont-----	60	Somewhat limited Slope Slow water movement	0.84  0.79	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope	0.84
Kauder, moist-----	30	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00  0.84	Very limited Depth to saturated zone Slope Seepage	1.00  1.00 0.50	Somewhat limited Slope Depth to saturated zone Too clayey	0.84  0.99  0.50
98: Grangemont, wet-----	45	Very limited Too steep Slow water movement	1.00  0.79	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Riswold-----	35	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
99: Grasshopper-----	80	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00  1.00  1.00  0.72	Very limited Flooding Depth to saturated zone Seepage	1.00  1.00  1.00	Very limited Depth to saturated zone Seepage	1.00  0.21
100: Gwin-----	45	Very limited Depth to bedrock Too steep Large stones	1.00  1.00 0.04	Very limited Depth to hard bedrock Slope Large stones Seepage	1.00  1.00 0.61 0.27	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00  1.00 0.04 0.50 0.15
Kettenbach-----	40	Very limited Depth to bedrock Slow water movement Too steep Large stones	1.00  1.00  1.00 0.22	Very limited Depth to hard bedrock Slope Large stones	1.00  1.00 0.13	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00  1.00 0.22 0.50 0.21

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101: Gwin-----	45	Very limited Depth to bedrock Too steep Large stones	1.00 1.00 0.04	Very limited Depth to hard bedrock Slope Large stones Seepage	1.00 1.00 1.00 0.61 0.27	Very limited Depth to bedrock Too steep Large stones Too clayey Gravel content	1.00 1.00 0.04 0.50 0.15
Kettenbach-----	30	Very limited Depth to bedrock Slow water movement Too steep Large stones	1.00 1.00 1.00 1.00 0.22	Very limited Depth to hard bedrock Slope Large stones	1.00 1.00 1.00 0.13	Very limited Depth to bedrock Too steep Large stones Too clayey Gravel content	1.00 1.00 0.22 0.50 0.21
Keuterville-----	20	Very limited Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Gravel content Too clayey	1.00 0.93 0.50
102: Hildebrand-----	55	Very limited Depth to saturated zone Slow water movement	1.00 0.50	Very limited Depth to saturated zone Slope Seepage	1.00 0.68 0.50	Somewhat limited Depth to saturated zone	0.35
Spacecreek, dry-----	35	Very limited Depth to saturated zone Slow water movement	1.00 0.50	Very limited Seepage Depth to saturated zone Slope	1.00 1.00 0.68	Somewhat limited Depth to saturated zone	0.35
103: Hubub, wet-----	75	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
104: Hubub, wet-----	65	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Dworshak-----	30	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
105: Hubub-----	65	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Lostpete-----	20	Very limited Too steep Slow water movement	1.00 0.82	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106: Hucberit-----	85	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 0.50 0.50
107: Hucberit-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 0.50 0.50
Vaywood, high precipitation-----	35	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
108: Hugus-----	85	Very limited Too steep Slow water movement Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.31
109: Hugus-----	90	Very limited Too steep Slow water movement Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.31
110: Hugus, moist-----	75	Very limited Too steep Slow water movement Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.31
111: Hugus, high precipitation-----	75	Very limited Too steep Slow water movement Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.31

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
112: Hugus, moist-----	75	Very limited Too steep Slow water movement Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.31
Hugus-----	15	Very limited Too steep Slow water movement Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.31
113: Hugus-----	60	Very limited Too steep Slow water movement Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.31
Dworshak-----	35	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
114: Itzee-----	90	Very limited Seepage, bottom layer Filtering capacity	1.00 1.00	Very limited Seepage	1.00	Very limited Seepage Too sandy	1.00 0.50
115: Jacket-----	80	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too clayey Hard to compact Too steep	1.00 1.00 1.00
116: Jacket-----	85	Very limited Slow water movement	1.00	Very limited Slope	1.00	Very limited Hard to compact Too clayey	1.00 0.50
117: Jacket-----	45	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Hard to compact	1.00 1.00 1.00
Wellsbench-----	35	Very limited Slow water movement Too steep Depth to bedrock Large stones	1.00 1.00 1.00 1.00 0.11	Very limited Slope Depth to hard bedrock	1.00 0.99	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00 0.99 0.13 0.50 0.01



# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
118: Jacot-----	45	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.21 0.33
Garveson-----	35	Very limited Too steep Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy Gravel content	1.00 1.00 1.00 0.51
119: Jacot-----	45	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.21 0.33
Garveson-----	35	Very limited Too steep Seepage, bottom layer Filtering capacity	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy Gravel content	1.00 1.00 1.00 0.51
120: Jaype-----	50	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Revling-----	35	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
121: Jaype, dry-----	65	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Revling, dry-----	15	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
122: Jaype-----	50	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Statemeadow-----	25	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
123: Joel-----	50	Very limited Slow water movement Slope	1.00  0.84	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope Too clayey	0.84 0.50
Setters-----	30	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00  0.84	Very limited Depth to saturated zone Slope Seepage	1.00  1.00 0.50	Very limited Depth to saturated zone Too clayey Hard to compact Slope	1.00  1.00 1.00 0.84
124: Johnson-----	75	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.59 0.50	Very limited Slope Seepage Depth to soft bedrock	1.00 0.50 0.13	Very limited Too steep Depth to bedrock Too clayey	1.00 0.14 0.50
125: Johnson-----	55	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.59 0.50	Very limited Slope Seepage Depth to soft bedrock	1.00 0.50 0.13	Very limited Too steep Depth to bedrock Too clayey	1.00 0.14 0.50
Swayne-----	25	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Hard to compact Too clayey	1.00 1.00 0.50
126: Johnson-----	45	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.59 0.50	Very limited Slope Seepage Depth to soft bedrock	1.00 0.50 0.13	Very limited Too steep Depth to bedrock Too clayey	1.00 0.14 0.50
Swayne-----	40	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Hard to compact Too clayey	1.00 1.00 0.50
127: Johnson-----	50	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.59 0.50	Very limited Slope Seepage Depth to soft bedrock	1.00 0.50 0.13	Very limited Too steep Depth to bedrock Too clayey	1.00 0.14 0.50
Texascreek-----	35	Very limited Depth to bedrock Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00  1.00 1.00	Very limited Too steep Depth to bedrock Seepage	1.00 1.00 0.21

Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
128: Jury-----	80	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
129: Jury-----	85	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
130: Jury, cold-----	90	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
131: Jury-----	55	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Weitas-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
132: Jury-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Seepage Slope	1.00 1.00	Very limited Too steep	1.00
Weitas-----	30	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Seepage Slope	1.00 1.00	Very limited Too steep Seepage	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
133: Kauder-----	80	Very limited Depth to saturated zone Slow water movement Slope	1.00  1.00 0.84	Very limited Depth to saturated zone Slope Seepage	1.00  1.00 0.50	Somewhat limited Slope Depth to saturated zone Too clayey	0.84 0.99 0.50
134: Keeler, dry-----	50	Very limited Slow water movement Too steep Seepage, bottom layer	1.00  1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Keeler-----	30	Very limited Slow water movement Too steep Seepage, bottom layer	1.00  1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
135: Keeler, moist-----	65	Very limited Slow water movement Too steep Seepage, bottom layer	1.00  1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Keeler-----	20	Very limited Slow water movement Too steep Seepage, bottom layer	1.00  1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
136: Keeler-----	55	Very limited Slow water movement Too steep Seepage, bottom layer	1.00  1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Aldermant-----	30	Very limited Too steep Seepage, bottom layer Slow water movement	1.00  1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
137: Keeler-----	50	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
137: Jacot-----	30	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.21 0.33
138: Keeler-----	55	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Lado-----	20	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Too clayey	1.00 0.50
139: Kettenbach-----	40	Very limited Depth to bedrock Slow water movement Too steep Large stones	1.00 1.00 1.00 0.22	Very limited Depth to hard bedrock Slope Large stones	1.00 1.00 0.13	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00 1.00 0.22 0.50 0.21
Gwin-----	35	Very limited Depth to bedrock Too steep Large stones	1.00 1.00 0.04	Very limited Depth to hard bedrock Slope Large stones Seepage	1.00 1.00 0.61 0.27	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00 1.00 0.04 0.50 0.15
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140: Kettenbach-----	45	Very limited Depth to bedrock Slow water movement Too steep Large stones	1.00 1.00 1.00 0.22	Very limited Depth to hard bedrock Slope Large stones	1.00 1.00 0.13	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00 1.00 0.22 0.50 0.21
Keuterville-----	30	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Gravel content Too clayey	1.00 0.93 0.50
141: Keuterville-----	80	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Gravel content Too clayey	1.00 0.93 0.50
142: Keuterville-----	65	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Gravel content Too clayey	1.00 0.93 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
143: Keuterville-----	65	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Gravel content	1.00 0.50 0.49
Rock outcrop-----	20	Not rated		Not rated		Not rated	
144: Klickson-----	85	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Gravel content	1.00 0.50 0.07
145: Klickson-----	70	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Gravel content	1.00 0.50 0.07
146: Klickson-----	50	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Gravel content	1.00 0.50 0.07
Agatha-----	35	Very limited Too steep Slow water movement Depth to bedrock Large stones	1.00 0.50 0.27 0.16	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Large stones Too clayey Gravel content	1.00 0.60 0.50 0.01
147: Klickson-----	50	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Gravel content	1.00 0.50 0.07
Kettenbach-----	30	Very limited Depth to bedrock Slow water movement Too steep Large stones	1.00 1.00 1.00 0.22	Very limited Depth to hard bedrock Slope Large stones	1.00 1.00 0.13	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00 1.00 0.22 0.50 0.21
148: Klickson-----	50	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Gravel content	1.00 0.50 0.07
Rock outcrop-----	20	Not rated		Not rated		Not rated	
Kettenbach-----	15	Very limited Depth to bedrock Slow water movement Too steep Large stones	1.00 1.00 1.00 0.22	Very limited Depth to hard bedrock Slope Large stones	1.00 1.00 0.13	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00 1.00 0.22 0.50 0.21

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
149: Konkol-----	45	Very limited Too steep Slow water movement	1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Revling-----	25	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
150: Kooskia-----	80	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Too clayey Hard to compact Too steep	1.00 1.00 1.00 1.00
151: Kooskia-----	80	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 0.98 0.50	Very limited Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00
152: Kruse-----	85	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Too clayey	1.00 0.50
153: Kruse-----	75	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Too clayey	1.00 0.50
154: Kruse-----	50	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Too clayey	1.00 0.50
Alderland-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
155: Kruse-----	50	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00 1.00	Very limited Too steep Too clayey	1.00 1.00 0.50
Aldermant-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 1.00 0.50
156: Kruse-----	55	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00 1.00	Very limited Too steep Too clayey	1.00 1.00 0.50
McCrosket, dry-----	40	Very limited Too steep Depth to bedrock Large stones Slow water movement	1.00 0.86 0.84 0.50	Very limited Slope Seepage Depth to soft bedrock Large stones	1.00 0.50 0.61 0.01	Very limited Too steep Large stones Depth to bedrock	1.00 0.97 0.61
157: Kruse-----	70	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00 1.00	Very limited Too steep Too clayey	1.00 1.00 0.50
Noil-----	20	Very limited Too steep Seepage, bottom layer Depth to bedrock Large stones	1.00 1.00 1.00 0.98 0.03	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 1.00 0.93	Very limited Too steep Depth to bedrock Seepage Large stones Gravel content	1.00 0.94 0.50 0.04 0.27
158: Kruse-----	45	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00 1.00	Very limited Too steep Too clayey	1.00 1.00 0.50
Teakean-----	40	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00 1.00	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.92	Very limited Too steep Depth to saturated zone Too clayey	1.00 0.96 0.50



# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
159: Larkin-----	50	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Driscoll-----	35	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.99	Very limited Too steep Too clayey Hard to compact Depth to saturated zone	1.00 1.00 1.00 1.00
160: Lebaron-----	45	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Too clayey	1.00 0.50
Latahco-----	40	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Too clayey	1.00 0.50
161: Lewhand-----	65	Very limited Flooding Depth to saturated zone Slow water movement Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00
Burntcreek-----	20	Very limited Flooding Depth to saturated zone Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00
162: Lewhand-----	80	Very limited Flooding Depth to saturated zone Slow water movement Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
162: Teneb-----	15	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.27	Very limited Depth to saturated zone Too clayey	1.00 0.50
163: Longbar-----	55	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.72	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Bigtalk-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
164: Longbar-----	55	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.72	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Bigtalk-----	35	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
165: Longpen-----	75	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope	1.00	Very limited Too steep	1.00
166: Longpen-----	60	Very limited Slow water movement Slope	1.00 0.84	Very limited Slope	1.00	Somewhat limited Slope	0.84
167: Meland-----	50	Very limited Depth to bedrock Slow water movement Slope	1.00 1.00 0.84	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 0.50	Very limited Depth to bedrock Slope Too clayey	1.00 0.84 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
167: Jacket-----	40	Very limited Slow water movement Slope	1.00  0.84	Very limited Slope	1.00	Very limited Hard to compact Slope Too clayey	1.00 0.84 0.50
168: Meland-----	55	Very limited Depth to bedrock Slow water movement Too steep	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 0.50	Very limited Depth to bedrock Too steep Too clayey	1.00 1.00 0.50
Keuterville-----	30	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey Gravel content	1.00 0.50 0.49
169: Mushel-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
Brodeer-----	30	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
170: Mushel-----	50	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
Dullaxe-----	45	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 1.00 0.50
171: Nakarna, high precipitation-----	75	Very limited Too steep Seepage, bottom layer Depth to bedrock	1.00 1.00 0.83	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.54	Very limited Too steep Depth to bedrock Seepage	1.00 0.54 0.21

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
172: Nakarna, high precipitation-----	75	Very limited Too steep Seepage, bottom layer Depth to bedrock	 1.00 1.00  0.99	Very limited Slope Seepage Depth to soft bedrock	 1.00 1.00 0.96  	Very limited Too steep Depth to bedrock Seepage	 1.00 0.96 0.21  
173: Nakarna-----	45	Very limited Too steep Seepage, bottom layer Depth to bedrock	 1.00 1.00  0.99	Very limited Slope Seepage Depth to soft bedrock	 1.00 1.00 0.96  	Very limited Too steep Depth to bedrock Seepage	 1.00 0.96 0.21  
Nakarna, warm-----	35	Very limited Too steep Seepage, bottom layer Depth to bedrock	 1.00 1.00  0.99	Very limited Slope Seepage Depth to soft bedrock	 1.00 1.00 0.96  	Very limited Too steep Depth to bedrock Seepage	 1.00 0.96 0.21  
174: Narnett-----	60	Very limited Slow water movement Too steep	 1.00  1.00	Very limited Slope Seepage	 1.00 0.50  	Very limited Too steep	 1.00   
Jury-----	20	Very limited Too steep Seepage, bottom layer Slow water movement	 1.00 1.00  0.50  	Very limited Slope Seepage	 1.00 1.00    	Very limited Too steep	 1.00     
175: Neva-----	80	Very limited Too steep Slow water movement	 1.00 0.82  	Very limited Slope Seepage	 1.00 0.50  	Very limited Too steep	 1.00    
176: Newlig-----	85	Very limited Seepage, bottom layer Slope Slow water movement	 1.00  0.84 0.82  	Very limited Slope Seepage	 1.00 1.00    	Somewhat limited Slope Too clayey	 0.84 0.50    
177: Noil-----	45	Very limited Too steep Seepage, bottom layer Depth to bedrock Large stones	 1.00 1.00  0.98 0.03	Very limited Slope Seepage Depth to soft bedrock	 1.00 1.00 0.93  	Very limited Too steep Depth to bedrock Seepage Large stones Gravel content	 1.00 0.94 0.50 0.04 0.27

Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
177: Keeler-----	30	Very limited Slow water movement Too steep Seepage, bottom layer	1.00 1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
178: Noil-----	70	Very limited Too steep Seepage, bottom layer Depth to bedrock Large stones	1.00 1.00 1.00 0.98 0.03	Very limited Slope Seepage Depth to soft bedrock	1.00 1.00 0.93	Very limited Too steep Depth to bedrock Seepage Large stones Gravel content	1.00 0.94 0.50 0.04 0.27
Bouldercreek, warm--	15	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Gravel content	1.00 0.50 0.04
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179: Norwidge, moist----	50	Very limited Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Seepage	1.00 0.92	Very limited Too steep Too clayey	1.00 0.50
Threebear, moist----	45	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone Too clayey	1.00 0.99 0.50
180: Odonnell-----	65	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone	1.00 0.99
Grandad-----	15	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
181: Odonnell-----	75	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00 1.00	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone Too clayey	1.00 0.99 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Flooding Depth to saturated zone Seepage, bottom layer	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Too sandy	1.00 0.50 0.50
Itzee-----	15	Very limited Seepage, bottom layer Filtering capacity	1.00 1.00	Very limited Seepage Slope	1.00 0.68	Very limited Seepage Too sandy	1.00 0.50
183: Pits, quarry-----	100	Not rated		Not rated		Not rated	
184: Placer-----	40	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.69 0.50	Very limited Slope Seepage Depth to soft bedrock	1.00 0.50 0.26	Very limited Too steep Depth to bedrock	1.00 0.26
Dowper-----	30	Very limited Too steep Slow water movement Depth to bedrock	1.00 0.72 0.09	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Grangemont-----	15	Very limited Too steep Slow water movement	1.00 0.79	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
185: Poorman, dry-----	70	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
186: Poorman, dry-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21
Poorman-----	30	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 0.21

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
187:							
Poorman-----	55	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.21
		Slow water movement	0.50				
Grandad-----	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
188:							
Poorman-----	50	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.21
		Slow water movement	0.50				
Grandad-----	40	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
189:							
Poorman-----	75	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.21
		Slow water movement	0.50				
Grandad, dry-----	20	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
190:							
Poorman-----	40	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.21
		Slow water movement	0.50				
Grandad, dry-----	35	Very limited		Very limited		Very limited	
		Too steep	1.00	Slope	1.00	Too steep	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
191:							
Reggear-----	55	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	0.84
		Slow water movement	1.00	Seepage	0.50	Depth to saturated zone	0.91
		Slope	0.84	Depth to saturated zone	0.83		

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
191: Kauder-----	25	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.84	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Somewhat limited Slope Depth to saturated zone Too clayey	0.84 0.99 0.50
192: Reggear-----	50	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.16	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.83	Somewhat limited Slope Depth to saturated zone	0.16 0.91
Seddow-----	30	Somewhat limited Depth to bedrock Slow water movement Slope	0.96 0.72 0.16	Very limited Slope Seepage Depth to hard bedrock	1.00 0.50 0.88	Somewhat limited Depth to bedrock Slope	0.88 0.16
193: Rettig, high elevation-----	80	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
194: Rettig-----	80	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
195: Rettig, cold-----	90	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
196: Rettig, cool-----	50	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09



# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
196: Rettig, dry-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
197: Rettig-----	45	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
Grandad-----	30	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
198: Rettig, warm, dry---	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
Township-----	25	Very limited Too steep Seepage, bottom layer Slow water movement Large stones	1.00 1.00 0.50 0.28	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Large stones	1.00 0.83
199: Rettig-----	40	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09
Township, wet-----	25	Very limited Too steep Seepage, bottom layer Slow water movement Large stones	1.00 1.00 0.50 0.28	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Large stones	1.00 0.83
Stepoff-----	15	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
200:							
Riswold-----	50	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Cranberry-----	45	Very limited Slow water movement Slope	1.00 0.16	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope Too clayey	0.16 0.50
201:							
Riswold-----	45	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Grangemont-----	40	Very limited Too steep Slow water movement	1.00 0.79	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
202:							
Rock outcrop-----	35	Not rated		Not rated		Not rated	
Whiskeycreek-----	30	Very limited Depth to bedrock Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00	Very limited Too steep Depth to bedrock Seepage Too sandy	1.00 1.00 1.00 0.50
Texascreek, dry-----	25	Very limited Depth to bedrock Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00	Very limited Too steep Depth to bedrock Seepage	1.00 1.00 0.21
203:							
Scaler-----	85	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.82	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 0.43 0.50
204:							
Scaler-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.82	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 0.43 0.50
Grandad-----	20	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
205: Scaler-----	60	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.82	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 0.43 0.50
Grangemont-----	30	Very limited Too steep Slow water movement	1.00 0.79	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
206: Scand-----	65	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
Scaler-----	15	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.82	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage Too sandy	1.00 0.43 0.50
207: Seddow-----	75	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.96 0.72	Very limited Slope Seepage Depth to hard bedrock	1.00 0.50 0.88	Very limited Too steep Depth to bedrock	1.00 0.88
208: Seddow-----	85	Very limited Too steep Depth to bedrock Slow water movement	1.00 0.96 0.72	Very limited Slope Seepage Depth to hard bedrock	1.00 0.50 0.88	Very limited Too steep Depth to bedrock	1.00 0.88
209: Seddow-----	80	Somewhat limited Depth to bedrock Slow water movement Slope	0.96 0.72 0.16	Very limited Slope Seepage Depth to hard bedrock	1.00 0.50 0.88	Somewhat limited Depth to bedrock Slope	0.88 0.16
210: Setters-----	80	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 0.92 0.50	Very limited Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
211: Shattuck-----	90	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
212: Shattuck-----	90	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
213: Shattuck, moist-----	90	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
214: Shattuck, moist-----	50	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Dworshak, moist-----	40	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
215: Shattuck-----	60	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
Dworshak-----	35	Very limited Slow water movement Too steep	1.00  1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
216: Sly-----	80	Very limited Slow water movement Slope	1.00  0.16	Very limited Slope Seepage	1.00 0.32	Somewhat limited Slope Too clayey	0.16 0.50
Wilkins-----	15	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage Slope	1.00 1.00 0.50 0.08	Very limited Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00
217: Southwick-----	85	Very limited Depth to saturated zone Slow water movement	1.00  1.00	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Too clayey	1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
218: Southwick-----	45	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Too steep	1.00 1.00
Larkin-----	40	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
219: Statemeadow-----	65	Very limited Slow water movement Slope	1.00 0.16	Very limited Slope Seepage	1.00 0.50	Somewhat limited Slope	0.16
Reggear-----	25	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.16	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.83	Somewhat limited Slope Depth to saturated zone	0.16 0.91
220: Swayne-----	85	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Hard to compact Too steep Too clayey	1.00 1.00 0.50
221: Taney-----	80	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Too clayey	1.00 0.50
222: Taney-----	50	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.44	Very limited Too clayey Hard to compact Too steep Depth to saturated zone	1.00 1.00 1.00 0.68
Joel-----	35	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep Too clayey	1.00 0.50
223: Taney-----	65	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone Too clayey	1.00 1.00 0.50

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
223: McCrosket-----	25	Very limited Too steep Depth to bedrock Large stones Slow water movement	1.00 0.86 0.84 0.50	Very limited Slope Seepage Depth to soft bedrock Large stones	1.00 0.50 0.61 0.01	Very limited Too steep Large stones Depth to bedrock	1.00 0.97 0.61
224: Taney-----	55	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 0.92 0.50	Very limited Depth to saturated zone Too clayey	1.00 0.50
Setters-----	35	Very limited Depth to saturated zone Slow water movement	1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 0.92 0.50	Very limited Depth to saturated zone Too clayey Hard to compact	1.00 1.00 1.00
225: Taney-----	40	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.96	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Slope Too clayey	1.00 0.96 0.50
Setters-----	40	Very limited Depth to saturated zone Slow water movement Slope	1.00 1.00 0.96	Very limited Slope Depth to saturated zone Seepage	1.00 1.00 0.50	Very limited Depth to saturated zone Too clayey Hard to compact Slope	1.00 1.00 1.00 0.96
226: Teakean-----	80	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Slope Seepage Depth to saturated zone	1.00 0.50 0.92	Very limited Too steep Depth to saturated zone Too clayey	1.00 0.96 0.50
227: Teneb-----	85	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.27	Very limited Depth to saturated zone Too clayey	1.00 0.50
228: Texascreek-----	55	Very limited Depth to bedrock Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00	Very limited Too steep Depth to bedrock Seepage	1.00 1.00 0.21
Rock outcrop-----	25	Not rated		Not rated		Not rated	

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
229: Texascreek, dry-----	45	Very limited Depth to bedrock Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Too steep Depth to bedrock Seepage	1.00 1.00 0.21
Whiskeycreek-----	35	Very limited Depth to bedrock Too steep Seepage, bottom layer	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 1.00 1.00	Very limited Too steep Depth to bedrock Seepage Too sandy	1.00 1.00 1.00 0.50
230: Norwidge-----	45	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.92	Very limited Too steep Too clayey	1.00 0.50
Threebear-----	45	Very limited Depth to saturated zone Slow water movement Too steep	1.00 1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.50	Very limited Too steep Depth to saturated zone Too clayey	1.00 1.00 0.50
231: Tomodo-----	80	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
232: Tomodo-----	60	Very limited Slow water movement Too steep	1.00 1.00	Very limited Slope Seepage	1.00 0.50	Very limited Too steep	1.00
Lado-----	15	Very limited Too steep Slow water movement	1.00 0.72	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Too clayey	1.00 0.50
233: Township-----	55	Very limited Too steep Seepage, bottom layer Slow water movement Large stones	1.00 1.00 0.50 0.28	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Large stones	1.00 0.83
Rettig-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Gravel content	1.00 0.09

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
234: Township-----	65	Very limited Too steep Seepage, bottom layer Slow water movement Large stones	 1.00 1.00 0.50 0.28	Very limited Slope Seepage	 1.00 1.00	Very limited Too steep Large stones	 1.00 0.83
Rettig-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	 1.00 1.00 0.50	Very limited Slope Seepage	 1.00 1.00	Very limited Too steep Gravel content	 1.00 0.09
235: Township, dry-----	45	Very limited Too steep Seepage, bottom layer Slow water movement Large stones	 1.00 1.00 0.50 0.28	Very limited Slope Seepage	 1.00 1.00	Very limited Too steep Large stones	 1.00 0.83
Rettig, low precipitation-----	25	Very limited Too steep Seepage, bottom layer Slow water movement	 1.00 1.00 0.50	Very limited Slope Seepage	 1.00 1.00	Very limited Too steep Gravel content	 1.00 0.09
Nakarna, dry-----	20	Very limited Too steep Seepage, bottom layer Depth to bedrock	 1.00 1.00 0.99	Very limited Slope Seepage Depth to soft bedrock	 1.00 1.00 0.96	Very limited Too steep Depth to bedrock Seepage	 1.00 0.96 0.21
236: Trappercreek-----	50	Very limited Slow water movement Seepage, bottom layer Slope	 1.00 1.00 0.16	Very limited Seepage Slope	 1.00 1.00	Somewhat limited Slope	 0.16
Narnett-----	35	Very limited Slow water movement Slope	 1.00 0.16	Very limited Slope Seepage	 1.00 0.50	Somewhat limited Slope	 0.16
237: Uvi-----	65	Very limited Too steep Seepage, bottom layer Slow water movement	 1.00 1.00 0.50	Very limited Slope Seepage	 1.00 1.00	Very limited Too steep	 1.00



# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
238: Uvi-----	90	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
239: Vaywood, high precipitation-----	60	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Vaywood, dry-----	30	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
240: Vaywood-----	85	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
241: Vaywood-----	65	Very limited Too steep Seepage, bottom layer	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Too steep Seepage	1.00 1.00
Handoff-----	20	Very limited Too steep Seepage, bottom layer Slow water movement	1.00 1.00 0.50	Very limited Slope Seepage	1.00 1.00	Very limited Too steep	1.00
242: Water-----	100	Not rated		Not rated		Not rated	
243: Wellsbench-----	80	Very limited Slow water movement Depth to bedrock Large stones	1.00 1.00 0.11	Somewhat limited Slope Depth to hard bedrock	0.92 0.99	Somewhat limited Depth to bedrock Large stones Too clayey Gravel content	0.99 0.13 0.50 0.01
244: Wellsbench-----	50	Very limited Slow water movement Too steep Depth to bedrock Large stones	1.00 1.00 1.00 1.00 0.11	Very limited Slope Depth to hard bedrock	1.00 0.99	Very limited Too steep Depth to bedrock Large stones Too clayey Gravel content	1.00 0.99 0.13 0.50 0.01

# Soil Survey of Clearwater Area, Idaho

Table 22.—Sanitary Facilities—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
244: Lacy-----	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard	1.00	Too steep	1.00
		Too steep	1.00	bedrock		Depth to bedrock	1.00
		Large stones	0.82	Slope	1.00	Large stones	0.82
				Large stones	1.00	Too clayey	0.50
245: Wilkins-----	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated	1.00
		Depth to saturated	1.00	Depth to saturated	1.00	zone	
		zone		zone		Too clayey	1.00
		Slow water	1.00	Seepage	0.50	Hard to compact	1.00
		movement		Slope	0.08		

# Soil Survey of Clearwater Area, Idaho

**Table 23.**—Source of Gravel, Sand, and Topsoil

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. These interpretations are designed as suitabilities as opposed to limitations. The numbers in the values columns range from 0.00 to 1.00. The smaller the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Rock fragments Slope Too clayey	0.00 0.00 0.00 0.70
Rock outcrop-----	15	Not rated		Not rated		Not rated	
2: Agatha-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Rock fragments Slope Too clayey	0.00 0.00 0.00 0.70
3: Agatha-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Rock fragments Slope Too clayey	0.00 0.00 0.00 0.70
4: Ahsahka-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
Fordcreek-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.68
5: Ahsahka-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
Whiskeycreek-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.14	Poor Depth to bedrock Slope Too sandy Rock fragments	0.00 0.00 0.01 0.12
6: Aldermant-----	85	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.10	Poor Slope Hard to reclaim (rock fragments)	0.00 0.02

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel	Potential source of sand	Potential source of topsoil			
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7: Aldermant-----	90	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.10	Poor Slope Hard to reclaim (rock fragments)	0.00 0.02
8: Aldermant, dry-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.10	Poor Slope Hard to reclaim (rock fragments)	0.00 0.02
9: Aquandic Cryaquepts	90	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.04	Fair Wetness depth Too acid	0.08 0.95
10: Aquandic Endoaquepts	60	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Fair Wetness depth Too acid	0.08 0.88
Aquandic Dystrudepts	20	Fair Thickest layer Bottom layer	0.34 0.34	Poor Bottom layer Thickest layer	0.03 0.03	Poor Wetness depth Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00
11: Bandmill, dry-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too clayey	0.00 0.53
Grangemont-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope Too acid	0.16 0.98
Bargamin-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
12: Bandmill-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope Too clayey	0.37 0.53
Riswold-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope Hard to reclaim (rock fragments) Rock fragments	0.37 0.82 0.88
13: Berthahill, moist---	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Rock fragments Slope Too acid	0.00 0.00 0.00 0.88

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13: Handoff-----	15	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Hard to reclaim	0.00
		Bottom layer	0.00	Bottom layer	0.00	(rock fragments)	
						Slope	0.00
						Rock fragments	0.88
14: Berthahill-----	70	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Hard to reclaim	0.00
		Bottom layer	0.00	Thickest layer	0.00	(rock fragments)	
						Rock fragments	0.00
						Slope	0.00
						Too acid	0.88
Handoff-----	20	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Hard to reclaim	0.00
		Bottom layer	0.00	Bottom layer	0.00	(rock fragments)	
						Slope	0.00
						Rock fragments	0.88
15: Berthahill-----	65	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Hard to reclaim	0.00
		Bottom layer	0.00	Thickest layer	0.00	(rock fragments)	
						Rock fragments	0.00
						Slope	0.00
						Too acid	0.88
Shattuck-----	15	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Hard to reclaim	0.00
		Bottom layer	0.00	Thickest layer	0.00	(rock fragments)	
						Slope	0.00
						Rock fragments	0.84
16: Bigtalk, cool-----	60	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
Bigtalk, wet-----	25	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
17: Bigtalk-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
18: Bigtalk, cool-----	50	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
Floodwood, cool-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel	Potential source of sand	Potential source of topsoil			
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19: Bigtalk, cool-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
Keeler, cool-----	20	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
20: Bouldercreek, moist	85	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08
21: Bouldercreek-----	75	Fair Thickest layer Bottom layer	0.00 0.25	Poor Thickest layer Bottom layer	0.00 0.02	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
22: Bouldercreek-----	75	Fair Thickest layer Bottom layer	0.00 0.25	Poor Thickest layer Bottom layer	0.00 0.02	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
23: Bouldercreek, moist	75	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08
Brodeer-----	15	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.00 0.88
24: Bouldercreek-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08
Brodeer-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.00 0.88
25: Bouldercreek-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25: Judgetown-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Fair Bottom layer Thickest layer	0.12 0.12	Poor Slope	0.00
26: Bouldercreek, high precipitation-----	50	Fair Thickest layer Bottom layer	0.00 0.25	Poor Thickest layer Bottom layer	0.00 0.02	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
Marblecreek-----	30	Fair Bottom layer Thickest layer	0.00 0.12	Poor Thickest layer Bottom layer	0.01 0.00	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
27: Bouldercreek, cool, dry-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08
Rettig, cool-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.03 0.32
28: Brequito, dry-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
29: Brequito-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
Grangemont-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.98
30: Brequito-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
Lado, dry-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
31: Brequito-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope Too acid	0.84 0.95

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
31: Lado, dry-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope	0.84
32: Brequito-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
Mushel-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.04	Poor Slope Rock fragments	0.00 0.76
33: Brequito-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
Mushel-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.04	Poor Slope Rock fragments	0.00 0.76
34: Brodeer, dry-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
Brodeer-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
35: Brodeer-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
Mushel-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.04	Poor Slope Rock fragments	0.00 0.76
36: Brodeer, warm-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
Mushel, dry-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.04	Poor Slope Rock fragments	0.00 0.76
37: Brodeer-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
Boulder creek-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08



# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
38: Brodeer-----	50	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.88
Flewsie, dry-----	40	Poor		Poor		Poor	
		Organic matter content	0.00	Organic matter content	0.00	Slope	0.00
		Thickest layer	0.00	Thickest layer	0.01		
		Bottom layer	0.00	Bottom layer	0.02		
39: Brodeer-----	60	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.88
Lostpete-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
40: Brodeer, moist-----	55	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.88
Lostpete, moist-----	30	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
41: Brodeer, dry-----	50	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.88
Mushel-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.04	Rock fragments	0.76
42: Brodeer-----	60	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.88
Mushel-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.04	Rock fragments	0.76
43: Burntcreek-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Bottom layer	0.04	Hard to reclaim (rock fragments)	0.46
44: Campra-----	80	Fair		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.57	Thickest layer	0.00	Slope	0.00
						Hard to reclaim (rock fragments)	0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel	Potential source of sand	Potential source of topsoil			
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45: Campra-----	45	Fair Thickest layer Bottom layer	0.00 0.57	Poor Bottom layer Thickest layer	0.00 0.00	Poor Rock fragments Hard to reclaim (rock fragments) Slope	0.00 0.00 0.00
Sly-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.00 0.00
46: Carlinton-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth Slope	0.00 0.00
47: Carlinton-----	85	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth Slope	0.00 0.37
48: Carlinton-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth Slope	0.00 0.84
Kruse-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
49: Carlinton-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth Slope	0.00 0.96
Seddow-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Hard to reclaim (rock fragments) Slope	0.08 0.96
50: Caseycreek-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.02 0.59	Fair Wetness depth Too acid	0.76 0.98
51: Cavendish-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Hard to reclaim (rock fragments) Rock fragments	0.05 0.68
52: Cavendish-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope Hard to reclaim (rock fragments) Rock fragments	0.04 0.05 0.68

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52: Taney-----	40	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.07
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.04
53: Cobbler-----	55	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10	Rock fragments	0.82
Aldermant-----	35	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.07	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10	Hard to reclaim (rock fragments)	0.02
54: Cobbler-----	50	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10	Rock fragments	0.82
Noil-----	45	Fair		Poor		Poor	
		Thickest layer	0.07	Bottom layer	0.04	Rock fragments	0.00
		Bottom layer	0.11	Thickest layer	0.04	Slope	0.00
						Hard to reclaim (rock fragments)	0.00
55: Cranberry-----	60	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
Riswold-----	20	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Slope	0.00
		Thickest layer	0.00	Thickest layer	0.00	Hard to reclaim (rock fragments)	0.82
		Bottom layer	0.00	Organic matter content	0.00	Rock fragments	0.88
56: Crumarine-----	95	Poor		Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.04	Wetness depth	0.06
		Bottom layer	0.00	Bottom layer	0.44	Rock fragments	0.76
57: Dam-----	100	Not rated		Not rated		Not rated	
58: Driscoll-----	85	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.18
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.00
59: Driscoll-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.18
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
						Too clayey	0.00
Larkin-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
60: Dullaxe, high elevation-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Dullaxe-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
61: Dullaxe, dry-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Dullaxe, wet-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
62: Dullaxe-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Brodeer-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
63: Dullaxe-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Brodeer-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
64: Dullaxe-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Judgetown-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Fair Bottom layer Thickest layer	0.12 0.12	Poor Slope	0.00
65: Dullaxe-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Judgetown, moist----	25	Poor Thickest layer Bottom layer	0.00 0.00	Fair Bottom layer Thickest layer	0.12 0.12	Poor Slope	0.00
66: Dullaxe-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66: Jury, moist-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
67: Dumps, wood slash---	100	Not rated		Not rated		Not rated	
68: Dworshak-----	85	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.68
69: Dworshak-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.68
Brequito-----	15	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
70: Elkberry-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
Elkberry, wet-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
71: Elkberry-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
Dworshak-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.68
72: Elkridge-----	55	Fair Thickest layer Bottom layer	0.00 0.14	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Slope Rock fragments	0.00 0.00 0.00
Riswold-----	40	Poor Organic matter content Thickest layer Bottom layer	0.00 0.00 0.00	Poor Bottom layer Thickest layer Organic matter content	0.00 0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.82 0.88

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73: Elkridge-----	65	Fair Thickest layer Bottom layer	0.00 0.14	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Slope Rock fragments	0.00 0.00 0.00
Riswold-----	30	Poor Organic matter content Thickest layer Bottom layer	0.00 0.00 0.00	Poor Bottom layer Thickest layer Organic matter content	0.00 0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.82 0.88
74: Fico, dry-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Fair Bottom layer Thickest layer	0.12 0.12	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.06 0.00 0.92
Hucberit, warm-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.04 0.11	Poor Slope Too acid	0.00 0.88
75: Fico-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Fair Bottom layer Thickest layer	0.12 0.12	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.06 0.00 0.92
Weitas-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00
76: Flewsie, high precipitation-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.97
77: Flewsie, low precipitation-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.01 0.02	Poor Slope	0.00
Flewsie, dry-----	20	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.01 0.02	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
78: Floodwood-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.88 0.96
79: Floodwood, warm----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
Keeler-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
80: Floodwood-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.88 0.96
Keeler, warm-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.82
81: Floodwood-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.88 0.96
Keeler, warm-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.82
82: Flumecreek-----	85	Poor Organic matter content Thickest layer Bottom layer	0.00 0.00 0.00	Poor Thickest layer Organic matter content Bottom layer	0.00 0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08
83: Flumecreek-----	65	Poor Organic matter content Thickest layer Bottom layer	0.00 0.00 0.00	Poor Thickest layer Organic matter content Bottom layer	0.00 0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.08

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel	Potential source of sand	Potential source of topsoil
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
83: Stepoff-----	20	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope Too acid Hard to reclaim (rock fragments) Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.59 0.00 0.88
Dworshak, dry-----	15	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope Hard to reclaim (rock fragments) Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.68
84: Fordcreek-----	70	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.68
85: Fordcreek-----	80	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Fair Rock fragments Slope
		0.00 0.00	0.00 0.00	0.68 0.84
86: Garveson, high precipitation-----	55	Poor Thickest layer Bottom layer	Fair Thickest layer Bottom layer	Poor Rock fragments Slope Too sandy Hard to reclaim (rock fragments) Too acid
		0.00 0.00	0.00 0.54	0.00 0.00 0.00 0.05 0.98
Floodwood-----	30	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope Rock fragments Hard to reclaim (rock fragments)
		0.00 0.00	0.00 0.00	0.00 0.00 0.88 0.96
87: Gramil-----	60	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Too clayey Wetness depth
		0.00 0.00	0.00 0.00	0.00 0.00
Lewhand-----	30	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Wetness depth
		0.00 0.00	0.00 0.00	0.00
88: Gramil-----	50	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Too clayey Wetness depth
		0.00 0.00	0.00 0.00	0.00 0.00
Reggear-----	40	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Fair Wetness depth
		0.00 0.00	0.00 0.00	0.44



# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89: Grandad-----	85	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
90: Grandad, dry-----	70	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
Grandad-----	20	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
91: Grandad, dry-----	70	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
Grandad-----	20	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
92: Grandad-----	55	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
Rettig-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Hard to reclaim (rock fragments)	0.03
						Rock fragments	0.32
93: Grandad, wet-----	60	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
Rettig, wet-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Hard to reclaim (rock fragments)	0.03
						Rock fragments	0.32
94: Grandad, dry-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
Scand-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.04		
95: Grangemont-----	60	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.16
		Bottom layer	0.00	Thickest layer	0.00	Too acid	0.98

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
95: Kauder-----	35	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.20
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.16
96: Grangemont, dry-----	50	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.16
		Bottom layer	0.00	Thickest layer	0.00	Too acid	0.98
Kauder, dry-----	40	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.20
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.16
97: Grangemont-----	60	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.16
		Bottom layer	0.00	Thickest layer	0.00	Too acid	0.98
Kauder, moist-----	30	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.20
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.16
98: Grangemont, wet-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too acid	0.98
Riswold-----	35	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Slope	0.00
		Thickest layer	0.00	Thickest layer	0.00	Hard to reclaim (rock fragments)	0.82
		Bottom layer	0.00	Organic matter content	0.00	Rock fragments	0.88
99: Grasshopper-----	80	Poor		Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.03	Wetness depth	0.08
		Bottom layer	0.00	Bottom layer	0.04		
100: Gwin-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Depth to bedrock	0.00
		Bottom layer	0.03	Thickest layer	0.00	Slope	0.00
						Rock fragments	0.00
Kettenbach-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
						Depth to bedrock	0.93
101: Gwin-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Depth to bedrock	0.00
		Bottom layer	0.03	Thickest layer	0.00	Rock fragments	0.00
						Slope	0.00
Kettenbach-----	30	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
						Depth to bedrock	0.93

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
101: Keuterville-----	20	Fair		Poor		Poor	
		Thickest layer	0.25	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.00	Thickest layer	0.00	Hard to reclaim (rock fragments)	0.00
						Slope	0.00
102: Hildebrand-----	55	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.94
		Bottom layer	0.00	Thickest layer	0.00		
Spacecreek, dry-----	35	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.94
		Bottom layer	0.00	Thickest layer	0.04	Too acid	0.88
103: Hubub, wet-----	75	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Slope	0.00
		Thickest layer	0.00	Thickest layer	0.00	Hard to reclaim (rock fragments)	0.00
		Bottom layer	0.00	content			
104: Hubub, wet-----	65	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Hard to reclaim (rock fragments)	0.00
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Organic matter content			
Dworshak-----	30	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Hard to reclaim (rock fragments)	0.00
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
						Rock fragments	0.68
105: Hubub-----	65	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Hard to reclaim (rock fragments)	0.00
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	content			
Lostpete-----	20	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
106: Hucberit-----	85	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.04	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.11	Too acid	0.88
107: Hucberit-----	40	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.04	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.11	Too acid	0.88

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107: Vaywood, high precipitation-----	35	Poor		Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.02	Rock fragments	0.00
		Thickest layer	0.00	Thickest layer	0.03	Slope	0.00
						Hard to reclaim (rock fragments)	0.92
108: Hugus-----	85	Fair		Poor		Poor	
		Thickest layer	0.27	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.15	Bottom layer	0.05	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
109: Hugus-----	90	Fair		Poor		Poor	
		Thickest layer	0.27	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.15	Bottom layer	0.05	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
110: Hugus, moist-----	75	Fair		Poor		Poor	
		Thickest layer	0.27	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.15	Bottom layer	0.05	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
111: Hugus, high precipitation-----	75	Fair		Poor		Poor	
		Thickest layer	0.27	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.15	Bottom layer	0.05	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
112: Hugus, moist-----	75	Fair		Poor		Poor	
		Thickest layer	0.27	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.15	Bottom layer	0.05	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
Hugus-----	15	Fair		Poor		Poor	
		Thickest layer	0.27	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.15	Bottom layer	0.05	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
113: Hugus-----	60	Fair		Poor		Poor	
		Thickest layer	0.27	Thickest layer	0.03	Slope	0.00
		Bottom layer	0.15	Bottom layer	0.05	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
113: Dworshak-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00 0.68
114: Itzee-----	90	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.05 0.00	Poor Hard to reclaim (rock fragments) Too sandy Rock fragments	0.00 0.00 0.06 0.82
115: Jacket-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too clayey Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.88
116: Jacket-----	85	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Too clayey	0.93
117: Jacket-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too clayey Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.88
Wellsbench-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Rock fragments Slope Hard to reclaim (rock fragments) Too clayey	0.00 0.00 0.00 0.00 0.00
118: Jacot-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.04 0.08	Poor Hard to reclaim (rock fragments) Slope Rock fragments	0.00 0.00 0.00 0.00
Garveson-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.54	Poor Rock fragments Slope Too sandy Hard to reclaim (rock fragments) Too acid	0.00 0.00 0.00 0.05 0.98

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
119: Jacot-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.04 0.08	Poor Hard to reclaim (rock fragments) Slope Rock fragments	0.00 0.00 0.00
Garveson-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.54	Poor Rock fragments Slope Too sandy Hard to reclaim (rock fragments) Too acid	0.00 0.00 0.00 0.05 0.98
120: Jaype-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
Revling-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
121: Jaype, dry-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
Revling, dry-----	15	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
122: Jaype-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.95
Statemeadow-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
123: Joel-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope	0.16
Setters-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth Slope	0.00 0.16
124: Johnson-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.68
125: Johnson-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.68

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
125: Swayne-----	25	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.10
126: Johnson-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.68
Swayne-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.10
127: Johnson-----	50	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.68
Texascreek-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Rock fragments	0.00
						Depth to bedrock	0.79
128: Jury-----	80	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
129: Jury-----	85	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
130: Jury, cold-----	90	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
131: Jury-----	55	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
Weitas-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
132: Jury-----	60	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
Weitas-----	30	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.00	Thickest layer	0.00	Hard to reclaim (rock fragments)	0.00
						Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
133: Kauder-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Wetness depth Slope	0.20 0.16
134: Keeler, dry-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
Keeler-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
135: Keeler, moist-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
Keeler-----	20	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
136: Keeler-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
Aldermand-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.10	Poor Slope Hard to reclaim (rock fragments)	0.00 0.02
137: Keeler-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.82
Jacot-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.04 0.08	Poor Hard to reclaim (rock fragments) Slope Rock fragments	0.00 0.00 0.00
138: Keeler-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments)	0.00 0.68
Lado-----	20	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00



# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
139: Kettenbach-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Rock fragments Slope Depth to bedrock	0.00 0.00 0.00 0.93
Gwin-----	35	Poor Thickest layer Bottom layer	0.00 0.03	Poor Bottom layer Thickest layer	0.00 0.00	Poor Depth to bedrock Slope Rock fragments	0.00 0.00 0.00 0.00
Rock outcrop-----	15	Not rated		Not rated		Not rated	
140: Kettenbach-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Rock fragments Slope Depth to bedrock	0.00 0.00 0.00 0.93
Keuterville-----	30	Fair Thickest layer Bottom layer	0.25 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Rock fragments Slope Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.00
141: Keuterville-----	80	Fair Thickest layer Bottom layer	0.25 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Rock fragments Hard to reclaim (rock fragments) Slope	0.00 0.00 0.00 0.00 0.00
142: Keuterville-----	65	Fair Thickest layer Bottom layer	0.25 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Rock fragments Slope Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.00 0.00
143: Keuterville-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments) Too clayey	0.00 0.00 0.00 0.00 0.00 0.83
Rock outcrop-----	20	Not rated		Not rated		Not rated	
144: Klickson-----	85	Poor Organic matter content Thickest layer Bottom layer	0.00 0.00 0.00 0.00	Poor Bottom layer Thickest layer Organic matter content	0.00 0.00 0.00 0.00	Poor Rock fragments Slope Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.00 0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
145: Klickson-----	70	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Rock fragments	0.00
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Organic matter content	0.00	Hard to reclaim (rock fragments)	0.00
146: Klickson-----	50	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Rock fragments	0.00
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Organic matter content	0.00	Hard to reclaim (rock fragments)	0.00
Agatha-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Hard to reclaim (rock fragments)	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.00
						Slope	0.00
						Too clayey	0.70
147: Klickson-----	50	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Rock fragments	0.00
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Organic matter content	0.00	Hard to reclaim (rock fragments)	0.00
Kettenbach-----	30	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
						Depth to bedrock	0.93
148: Klickson-----	50	Poor		Poor		Poor	
		Organic matter content	0.00	Bottom layer	0.00	Rock fragments	0.00
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Organic matter content	0.00	Hard to reclaim (rock fragments)	0.00
Rock outcrop-----	20	Not rated		Not rated		Not rated	
Kettenbach-----	15	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
						Depth to bedrock	0.93
149: Konkol-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too acid	0.50
Revling-----	25	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.88

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
150: Kooskia-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.00
						Slope	0.00
151: Kooskia-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.00
152: Kruse-----	85	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.06		
153: Kruse-----	75	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
154: Kruse-----	50	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
Aldermant-----	40	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.07	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10	Hard to reclaim (rock fragments)	0.02
155: Kruse-----	50	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
Aldermant-----	35	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.07	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10	Hard to reclaim (rock fragments)	0.02
156: Kruse-----	55	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
McCrosket, dry-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Hard to reclaim (rock fragments)	0.00
		Bottom layer	0.00	Thickest layer	0.00	Rock fragments	0.00
						Slope	0.00
157: Kruse-----	70	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157: Noil-----	20	Fair		Poor		Poor	
		Thickest layer	0.07	Bottom layer	0.04	Rock fragments	0.00
		Bottom layer	0.11	Thickest layer	0.04	Slope	0.00
						Hard to reclaim (rock fragments)	0.00
158: Kruse-----	45	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10		
Teakean-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Wetness depth	0.32
						Rock fragments	0.12
						Too clayey	0.53
						Hard to reclaim (rock fragments)	0.92
159: Larkin-----	50	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
Driscoll-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Wetness depth	0.18
						Too clayey	0.00
160: Lebaron-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.64
Latahco-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00		
161: Lewhand-----	65	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00		
Burntcreek-----	20	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Bottom layer	0.04	Hard to reclaim (rock fragments)	0.46
162: Lewhand-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00		
Teneb-----	15	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.77
						Too acid	0.98

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
163: Longbar-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Rock fragments	0.00 0.88
Bigtalk-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
164: Longbar-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope Rock fragments	0.00 0.88
Bigtalk-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
165: Longpen-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
166: Longpen-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope	0.16
167: Meland-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Rock fragments Slope Too clayey Depth to bedrock	0.08 0.16 0.81 0.90
Jacket-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope Too clayey	0.16 0.93
168: Meland-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Too clayey Depth to bedrock	0.00 0.08 0.81 0.90
Keuterville-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments) Too clayey	0.00 0.00 0.00 0.83
169: Mushel-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.04	Poor Slope Rock fragments	0.00 0.76

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
169: Brodeer-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments	0.00 0.88
170: Mushel-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.04	Poor Slope Rock fragments	0.00 0.76
Dullaxe-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
171: Nakarna, high precipitation-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.50 0.92
172: Nakarna, high precipitation-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.01	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.08 0.84
173: Nakarna-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.01	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.08 0.84
Nakarna, warm-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.01	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.08 0.84
174: Narnett-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.08
Jury-----	20	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
175: Neva-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.05	Poor Slope Too acid	0.00 0.98

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
176: Newlig-----	85	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.16
		Bottom layer	0.00	Thickest layer	0.00		
177: Noil-----	45	Fair		Poor		Poor	
		Thickest layer	0.07	Bottom layer	0.04	Rock fragments	0.00
		Bottom layer	0.11	Thickest layer	0.04	Slope	0.00
						Hard to reclaim (rock fragments)	0.00
Keeler-----	30	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Hard to reclaim (rock fragments)	0.68
178: Noil-----	70	Fair		Poor		Poor	
		Thickest layer	0.07	Bottom layer	0.04	Rock fragments	0.00
		Bottom layer	0.11	Thickest layer	0.04	Slope	0.00
						Hard to reclaim (rock fragments)	0.00
Bouldercreek, warm--	15	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.10	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.08
Rock outcrop-----	15	Not rated		Not rated		Not rated	
179: Norwidge, moist-----	50	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too acid	0.98
Threebear, moist----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.20
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
180: Odonnell-----	65	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.20
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
Grandad-----	15	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
181: Odonnell-----	75	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Wetness depth	0.20

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.03 0.09	Poor Wetness depth Too sandy Hard to reclaim (rock fragments)	0.00 0.09 0.02
Itzee-----	15	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.05 0.00	Poor Hard to reclaim (rock fragments) Too sandy Rock fragments	0.00 0.06 0.82
183: Pits, quarry-----	100	Not rated		Not rated		Not rated	
184: Placer-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
Dowper-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
Grangemont-----	15	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.98
185: Poorman, dry-----	70	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00
186: Poorman, dry-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00
Poorman-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00
187: Poorman-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00
Grandad-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00
188: Poorman-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00



# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
188: Grandad-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
189: Poorman-----	75	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
Grandad, dry-----	20	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
190: Poorman-----	40	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
Grandad, dry-----	35	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03		
191: Reggear-----	55	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.44
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.16
Kauder-----	25	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.20
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.16
192: Reggear-----	50	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.44
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.84
Seddow-----	30	Poor		Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00	Hard to reclaim	0.08
		Bottom layer	0.00	Thickest layer	0.00	(rock fragments)	
						Slope	0.84
193: Rettig, high elevation-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Hard to reclaim	0.03
						(rock fragments)	
						Rock fragments	0.32
194: Rettig-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Hard to reclaim	0.03
						(rock fragments)	
						Rock fragments	0.32

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
195: Rettig, cold-----	90	Poor Thickest layer Bottom layer	 0.00 0.00	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.03  0.32
196: Rettig, cool-----	50	Poor Thickest layer Bottom layer	 0.00 0.00	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.03  0.32
Rettig, dry-----	40	Poor Thickest layer Bottom layer	 0.00 0.00	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.03  0.32
197: Rettig-----	45	Poor Thickest layer Bottom layer	 0.00 0.00	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.03  0.32
Grandad-----	30	Poor Thickest layer Bottom layer	 0.00 0.00	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope	 0.00
198: Rettig, warm, dry---	60	Poor Thickest layer Bottom layer	 0.00 0.00	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.03  0.32
Township-----	25	Fair Thickest layer Bottom layer	 0.00 0.10	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.00  0.00
199: Rettig-----	40	Poor Thickest layer Bottom layer	 0.00 0.00	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.03  0.32
Township, wet-----	25	Fair Thickest layer Bottom layer	 0.00 0.10	Poor Thickest layer Bottom layer	 0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	 0.00 0.00  0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
199: Stepoff-----	15	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.59 0.00 0.88
200: Riswold-----	50	Poor Organic matter content Thickest layer Bottom layer	0.00 0.00 0.00	Poor Bottom layer Thickest layer Organic matter content	0.00 0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.82 0.88
Cranberry-----	45	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope	0.84
201: Riswold-----	45	Poor Organic matter content Thickest layer Bottom layer	0.00 0.00 0.00	Poor Bottom layer Thickest layer Organic matter content	0.00 0.00 0.00	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.82 0.88
Grangemont-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.98
202: Rock outcrop-----	35	Not rated		Not rated		Not rated	
Whiskeycreek-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.14	Poor Depth to bedrock Slope Too sandy Rock fragments	0.00 0.00 0.01 0.12
Texascreek, dry-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Rock fragments Depth to bedrock	0.00 0.00 0.79
203: Scaler-----	85	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
204: Scaler-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Grandad-----	20	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
205: Scaler-----	60	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
Grangemont-----	30	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too acid	0.00 0.98
206: Scand-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.04	Poor Slope	0.00
Scaler-----	15	Poor Thickest layer Bottom layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.10	Poor Slope	0.00
207: Seddow-----	75	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.08
208: Seddow-----	85	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Hard to reclaim (rock fragments)	0.00 0.08
209: Seddow-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Hard to reclaim (rock fragments) Slope	0.08 0.84
210: Setters-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth	0.00
211: Shattuck-----	90	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Slope Rock fragments	0.00 0.00 0.84
212: Shattuck-----	90	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Slope Rock fragments	0.00 0.00 0.84

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel	Potential source of sand	Potential source of topsoil
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
213: Shattuck, moist-----	90	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Hard to reclaim (rock fragments) Slope Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.84
214: Shattuck, moist-----	50	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Hard to reclaim (rock fragments) Slope Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.84
Dworshak, moist-----	40	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope Hard to reclaim (rock fragments) Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.68
215: Shattuck-----	60	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Hard to reclaim (rock fragments) Slope Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.84
Dworshak-----	35	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope Hard to reclaim (rock fragments) Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.68
216: Sly-----	80	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Hard to reclaim (rock fragments) Slope
		0.00 0.00	0.00 0.00	0.00 0.00 0.84
Wilkins-----	15	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Too clayey Wetness depth
		0.00 0.00	0.00 0.00	0.00 0.00
217: Southwick-----	85	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Fair Wetness depth
		0.00 0.00	0.00 0.00	0.14
218: Southwick-----	45	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Wetness depth Slope
		0.00 0.00	0.00 0.00	0.14 0.00
Larkin-----	40	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope
		0.00 0.00	0.00 0.00	0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
219: Statemeadow-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope	0.84
Reggear-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Wetness depth Slope	0.44 0.84
220: Swayne-----	85	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Too clayey	0.00 0.10
221: Taney-----	80	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Wetness depth	0.07
222: Taney-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth Slope	0.76 0.00
Joel-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope	0.00
223: Taney-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Slope Wetness depth	0.00 0.07
McCrosket-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Hard to reclaim (rock fragments) Rock fragments Slope	0.00 0.00 0.00
224: Taney-----	55	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Wetness depth	0.07
Setters-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth	0.00
225: Taney-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Wetness depth Slope	0.07 0.04
Setters-----	40	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Poor Wetness depth Slope	0.00 0.04

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
226: Teakean-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Wetness depth	0.32
						Rock fragments	0.12
						Too clayey	0.53
						Hard to reclaim (rock fragments)	0.92
227: Teneb-----	85	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too clayey	0.77
						Too acid	0.98
228: Texascreek-----	55	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Rock fragments	0.00
						Depth to bedrock	0.79
Rock outcrop-----	25	Not rated		Not rated		Not rated	
229: Texascreek, dry-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Slope	0.00
		Bottom layer	0.00	Bottom layer	0.03	Rock fragments	0.00
						Depth to bedrock	0.79
Whiskeycreek-----	35	Poor		Fair		Poor	
		Thickest layer	0.00	Thickest layer	0.00	Depth to bedrock	0.00
		Bottom layer	0.00	Bottom layer	0.14	Slope	0.00
						Too sandy	0.01
						Rock fragments	0.12
230: Norwidge-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00	Too acid	0.98
Threebear-----	45	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Wetness depth	0.18
		Bottom layer	0.00	Thickest layer	0.00	Slope	0.00
231: Tomodo-----	80	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
232: Tomodo-----	60	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		
Lado-----	15	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Slope	0.00
		Bottom layer	0.00	Thickest layer	0.00		

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel	Potential source of sand	Potential source of topsoil			
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
233: Township-----	55	Fair Thickest layer Bottom layer	0.00 0.10	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00 0.00
Rettig-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.03 0.32
234: Township-----	65	Fair Thickest layer Bottom layer	0.00 0.10	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00 0.00
Rettig-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.03 0.32
235: Township, dry-----	45	Fair Thickest layer Bottom layer	0.00 0.10	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.00 0.00
Rettig, low precipitation-----	25	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope Hard to reclaim (rock fragments) Rock fragments	0.00 0.00 0.03 0.32
Nakarna, dry-----	20	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.01	Poor Slope Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.08 0.84
236: Trappercreek-----	50	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Slope	0.84
Narnett-----	35	Poor Thickest layer Bottom layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00	Fair Hard to reclaim (rock fragments) Slope	0.08 0.84
237: Uvi-----	65	Poor Thickest layer Bottom layer	0.00 0.00	Poor Thickest layer Bottom layer	0.00 0.03	Poor Slope	0.00



# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel	Potential source of sand	Potential source of topsoil
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
238: Uvi-----	90	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Slope Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.88
239: Vaywood, high precipitation-----	60	Poor Bottom layer Thickest layer	Poor Bottom layer Thickest layer	Poor Rock fragments Slope Hard to reclaim (rock fragments)
		0.00 0.00	0.02 0.03	0.00 0.00 0.92
Vaywood, dry-----	30	Poor Bottom layer Thickest layer	Poor Bottom layer Thickest layer	Poor Rock fragments Slope Hard to reclaim (rock fragments)
		0.00 0.00	0.02 0.03	0.00 0.00 0.92
240: Vaywood-----	85	Poor Bottom layer Thickest layer	Poor Bottom layer Thickest layer	Poor Rock fragments Slope Hard to reclaim (rock fragments)
		0.00 0.00	0.02 0.03	0.00 0.00 0.92
241: Vaywood-----	65	Poor Bottom layer Thickest layer	Poor Bottom layer Thickest layer	Poor Rock fragments Slope Hard to reclaim (rock fragments)
		0.00 0.00	0.02 0.03	0.00 0.00 0.92
Handoff-----	20	Poor Thickest layer Bottom layer	Poor Thickest layer Bottom layer	Poor Hard to reclaim (rock fragments) Slope Rock fragments
		0.00 0.00	0.00 0.00	0.00 0.00 0.88
242: Water-----	100	Not rated	Not rated	Not rated
243: Wellsbench-----	80	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Rock fragments Hard to reclaim (rock fragments) Too clayey
		0.00 0.00	0.00 0.00	0.00 0.00 0.00
244: Wellsbench-----	50	Poor Thickest layer Bottom layer	Poor Bottom layer Thickest layer	Poor Rock fragments Slope Hard to reclaim (rock fragments) Too clayey
		0.00 0.00	0.00 0.00	0.00 0.00 0.00 0.00

# Soil Survey of Clearwater Area, Idaho

Table 23.—Source of Gravel, Sand, and Topsoil—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
244: Lacy-----	30	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Rock fragments	0.00
		Bottom layer	0.00	Thickest layer	0.00	Depth to bedrock	0.00
						Slope	0.00
245: Wilkins-----	85	Poor		Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00	Too clayey	0.00
		Bottom layer	0.00	Thickest layer	0.00	Wetness depth	0.00

# Soil Survey of Clearwater Area, Idaho

**Table 24.**—Source of Reclamation Material and Roadfill

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. These interpretations are designed as suitabilities as opposed to limitations. The numbers in the values columns range from 0.00 to 1.00. The smaller the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Cobble content	0.55	Cobble content	0.10
		Low organic matter content	0.88		
		Too clayey	0.98		
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Fair		Poor	
		Too acid	0.50	Cobble content	0.10
		Cobble content	0.55	Slope	0.00
		Low organic matter content	0.88		
		Too clayey	0.98		
3: Agatha-----	75	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Cobble content	0.55	Cobble content	0.10
		Low organic matter content	0.88		
		Too clayey	0.98		
4: Ahsahka-----	45	Fair		Poor	
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.99	Slope	0.00
				Shrink-swell	0.63
Fordcreek-----	40	Fair		Poor	
		Water erosion	0.99	Slope	0.00
		Low organic matter content	0.12	Low strength	0.00
				Depth to bedrock	0.02
				Shrink-swell	0.94
5: Ahsahka-----	50	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Water erosion	0.99	Low strength	0.00
				Shrink-swell	0.63
Whiskeycreek-----	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.01		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6: Aldermand-----	85	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.32		
		Stone content	0.72		
7: Aldermand-----	90	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.32		
		Stone content	0.72		
8: Aldermand, dry-----	75	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.32		
		Stone content	0.72		
9: Aquandic Cryaquepts	90	Poor		Fair	
		Wind erosion	0.00	Wetness depth	0.08
		Too acid	0.32		
		Water erosion	0.99		
		Low organic matter content	0.88		
10: Aquandic Endoaquepts	60	Poor		Fair	
		Wind erosion	0.00	Wetness depth	0.08
		Water erosion	0.90		
		Too acid	0.32		
Aquandic Dystrudepts	20	Fair		Poor	
		Too acid	0.50	Wetness depth	0.00
				Cobble content	0.75
11: Bandmill, dry-----	40	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.54	Shrink-swell	0.97
		Water erosion	0.99		
		Too clayey	0.92		
Grangemont-----	30	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Water erosion	0.37		
		Too acid	0.50		
		Low organic matter content	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
11: Bargamin-----	25	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Low organic matter content	0.12	Shrink-swell	0.69
		Water erosion	0.68	Slope	0.08
		Too acid	0.54		
12: Bandmill-----	40	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Low organic matter content	0.12	Shrink-swell	0.97
		Too acid	0.54		
		Water erosion	0.99		
		Too clayey	0.92		
Riswold-----	30	Poor		Fair	
		Wind erosion	0.00	Low strength	0.22
		Water erosion	0.68		
		Too acid	0.68		
		Low organic matter content	0.88		
13: Berthahill, moist---	75	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12		
		Too acid	0.32		
		Stone content	0.83		
		Cobble content	0.99		
Handoff-----	15	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.54		
		Water erosion	0.99		
		Low organic matter content	0.88		
		Stone content	0.94		
14: Berthahill-----	70	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12		
		Too acid	0.32		
		Stone content	0.83		
		Cobble content	0.99		
Handoff-----	20	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.54		
		Water erosion	0.99		
		Low organic matter content	0.88		
		Stone content	0.94		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
15: Berthahill-----	65	Poor Wind erosion Low organic matter content Too acid Stone content Cobble content	 0.00 0.12  0.32 0.83 0.99	Poor Slope	 0.00     
Shattuck-----	15	Poor Wind erosion Too acid Water erosion Stone content	 0.00 0.50 0.90 0.97	Poor Slope	 0.00   
16: Bigtalk, cool-----	60	Fair Too acid Low organic matter content	 0.84 0.88	Poor Slope	 0.00  
Bigtalk, wet-----	25	Fair Too acid Low organic matter content	 0.84 0.88	Poor Slope	 0.00  
17: Bigtalk-----	80	Fair Too acid Low organic matter content	 0.84 0.88	Poor Slope	 0.00  
18: Bigtalk, cool-----	50	Fair Too acid Low organic matter content	 0.84 0.88	Poor Slope	 0.00  
Floodwood, cool-----	40	Poor Wind erosion Too acid Low organic matter content	 0.00 0.32 0.88	Poor Slope	 0.00  
19: Bigtalk, cool-----	75	Fair Too acid Low organic matter content	 0.84 0.88	Poor Slope	 0.00  
Keeler, cool-----	20	Poor Wind erosion Too acid Low organic matter content	 0.00 0.84 0.88	Poor Slope	 0.00  

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
20: Bouldercreek, moist	85	Poor Wind erosion Low organic matter content Too acid	0.00 0.18 0.32	Poor Slope	0.00
21: Bouldercreek-----	75	Poor Wind erosion Water erosion Low organic matter content Stone content Droughty	0.00 0.37 0.12 0.61 0.80	Poor Slope Cobble content Stones	0.00 0.93 0.96
22: Bouldercreek-----	75	Poor Wind erosion Water erosion Low organic matter content Stone content Droughty	0.00 0.37 0.12 0.61 0.80	Poor Slope Cobble content Stones	0.00 0.93 0.96
23: Bouldercreek, moist	75	Poor Wind erosion Low organic matter content Too acid	0.00 0.18 0.32	Poor Slope	0.00
Brodeer-----	15	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.68 0.88 0.92	Poor Slope	0.00
24: Bouldercreek-----	65	Poor Wind erosion Low organic matter content Too acid	0.00 0.18 0.32	Poor Slope	0.00
Brodeer-----	25	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.68 0.88 0.92	Poor Slope	0.00
25: Bouldercreek-----	55	Poor Wind erosion Low organic matter content Too acid	0.00 0.18 0.32	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25: Judgetown-----	25	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12	Depth to bedrock	0.74
		Water erosion	0.68		
		Too acid	0.54		
26: Boulder creek, high precipitation-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Cobble content	0.93
		Low organic matter content	0.12	Stones	0.96
		Stone content	0.61		
		Droughty	0.80		
Marble creek-----	30	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.32	Cobble content	0.98
		Droughty	0.84		
		Cobble content	0.94		
27: Boulder creek, cool, dry-----	70	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.18		
		Too acid	0.32		
Rettig, cool-----	25	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
28: Brequito, dry-----	65	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37		
		Low organic matter content	0.12		
		Too acid	0.50		
29: Brequito-----	45	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37		
		Low organic matter content	0.12		
		Too acid	0.50		
Grangemont-----	40	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Low strength	0.00
		Too acid	0.50		
		Low organic matter content	0.50		



# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
30: Brequito-----	45	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.37 0.12 0.50	Poor Slope	 0.00
Lado, dry-----	35	Poor Wind erosion Too acid Water erosion	 0.00 0.32 0.99	Poor Slope Low strength	 0.00 0.22
31: Brequito-----	60	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.37 0.12 0.50	Good	
Lado, dry-----	25	Poor Wind erosion Water erosion	 0.00 0.99	Fair Low strength	 0.22
32: Brequito-----	50	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.37 0.12 0.50	Poor Slope	 0.00
Mushel-----	35	Poor Wind erosion Low organic matter content Too acid	 0.00 0.12 0.32	Poor Slope	 0.00
33: Brequito-----	50	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.37 0.12 0.50	Poor Slope	 0.00
Mushel-----	35	Poor Wind erosion Low organic matter content Too acid	 0.00 0.12 0.32	Poor Slope	 0.00
34: Brodeer, dry-----	55	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.68 0.88 0.92	Poor Slope	 0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
34: Brodeer-----	40	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.68 0.88 0.92	Poor Slope	0.00
35: Brodeer-----	45	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.68 0.88 0.92	Poor Slope	0.00
Mushel-----	40	Poor Wind erosion Low organic matter content Too acid	0.00 0.12 0.32	Poor Slope	0.00
36: Brodeer, warm-----	45	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.68 0.88 0.92	Poor Slope	0.00
Mushel, dry-----	30	Poor Wind erosion Low organic matter content Too acid	0.00 0.12 0.32	Poor Slope	0.00
37: Brodeer-----	65	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.68 0.88 0.92	Poor Slope	0.00
Boulder creek-----	25	Poor Wind erosion Low organic matter content Too acid	0.00 0.18 0.32	Poor Slope	0.00
38: Brodeer-----	50	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.32 0.68 0.88	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
38: Flewsie, dry-----	40	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Water erosion	0.68		
		Low organic matter content	0.10		
39: Brodeer-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.68		
		Low organic matter content	0.88		
		Too acid	0.92		
Lostpete-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12	Low strength	0.00
		Too acid	0.32	Shrink-swell	0.95
		Water erosion	0.68		
40: Brodeer, moist-----	55	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.68		
		Low organic matter content	0.88		
		Too acid	0.92		
Lostpete, moist-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12	Low strength	0.00
		Too acid	0.32	Shrink-swell	0.95
		Water erosion	0.68		
41: Brodeer, dry-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.68		
		Low organic matter content	0.88		
		Too acid	0.92		
Mushel-----	40	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12		
		Too acid	0.32		
42: Brodeer-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.68		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
42: Mushel-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12		
		Too acid	0.32		
43: Burntcreek-----	80	Fair		Poor	
		Too acid	0.74	Wetness depth	0.00
		Water erosion	0.99		
		Low organic matter content	0.88		
44: Campra-----	80	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
		Too acid	0.95		
45: Campra-----	45	Fair		Poor	
		Low organic matter content	0.50	Slope	0.00
		Too acid	0.95		
Sly-----	40	Fair		Fair	
		Low organic matter content	0.12	Shrink-swell	0.98
		Too acid	0.68		
		Water erosion	0.99		
46: Carlinton-----	80	Fair		Poor	
		Too acid	0.50	Wetness depth	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88	Slope	0.00
47: Carlinton-----	85	Fair		Poor	
		Too acid	0.50	Wetness depth	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		
48: Carlinton-----	50	Fair		Poor	
		Too acid	0.50	Wetness depth	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		
Kruse-----	35	Fair		Poor	
		Too acid	0.32	Low strength	0.00
		Water erosion	0.99		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
49: Carlinton-----	55	Fair Too acid Water erosion Low organic matter content	 0.50 0.99 0.88	Poor Wetness depth Low strength	 0.00 0.00
Seddow-----	35	Fair Too acid Low organic matter content	 0.88 0.88	Poor Low strength Depth to bedrock Shrink-swell	 0.00 0.12 0.99
50: Caseycreek-----	80	Fair Low organic matter content Too acid	 0.12 0.39	Fair Wetness depth	 0.76
51: Cavendish-----	75	Fair Water erosion Low organic matter content Too acid	 0.90 0.88 0.97	Poor Low strength Depth to bedrock Shrink-swell	 0.00 0.07 0.87
52: Cavendish-----	45	Fair Water erosion Low organic matter content Too acid	 0.90 0.88 0.97	Poor Low strength Depth to bedrock Shrink-swell	 0.00 0.07 0.87
Taney-----	40	Fair Water erosion Too acid	 0.37 0.84	Poor Low strength Wetness depth	 0.00 0.07
53: Cobbler-----	55	Fair Too acid Water erosion Low organic matter content	 0.32 0.90 0.88	Poor Slope	 0.00
Aldermand-----	35	Fair Low organic matter content Too acid Stone content	 0.12 0.32 0.72	Poor Slope	 0.00
54: Cobbler-----	50	Fair Too acid Water erosion Low organic matter content	 0.32 0.90 0.88	Poor Slope	 0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54: Noil-----	45	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.08	Depth to bedrock	0.07
		Droughty	0.71	Cobble content	0.43
55: Cranberry-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Low strength	0.00
		Low organic matter content	0.12	Shrink-swell	0.93
		Too acid	0.32		
Riswold-----	20	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.68	Low strength	0.22
		Too acid	0.68		
		Low organic matter content	0.88		
56: Crumarine-----	95	Fair		Fair	
		Low organic matter content	0.12	Wetness depth	0.06
		Water erosion	0.90		
		Too acid	0.68		
		Droughty	0.90		
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Water erosion	0.68	Wetness depth	0.18
		Low organic matter content	0.88	Shrink-swell	0.43
		Too acid	0.95		
59: Driscoll-----	45	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Water erosion	0.68	Wetness depth	0.18
		Low organic matter content	0.88	Shrink-swell	0.43
		Too acid	0.95	Slope	0.50
Larkin-----	35	Good		Poor	
				Low strength	0.00
				Slope	0.50
				Shrink-swell	0.96

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
60: Dullaxe, high elevation-----	45	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
Dullaxe-----	35	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
61: Dullaxe, dry-----	60	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
Dullaxe, wet-----	35	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
62: Dullaxe-----	50	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
Brodeer-----	35	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.68 0.88  0.92	Poor Slope	 0.00
63: Dullaxe-----	60	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
Brodeer-----	25	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.68 0.88  0.92	Poor Slope	 0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
64: Dullaxe-----	60	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
Judgetown-----	35	Poor Wind erosion Low organic matter content Water erosion Too acid	 0.00 0.12  0.68 0.54	Poor Slope Depth to bedrock	 0.00 0.74
65: Dullaxe-----	70	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
Judgetown, moist----	25	Poor Wind erosion Low organic matter content Water erosion Too acid	 0.00 0.12  0.68 0.54	Poor Slope Depth to bedrock	 0.00 0.74
66: Dullaxe-----	55	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.74 0.90	Poor Slope	 0.00
Jury, moist-----	30	Poor Wind erosion Too acid	 0.00 0.84	Poor Slope	 0.00
67: Dumps, wood slash---	100	Not rated		Not rated	
68: Dworshak-----	85	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.37 0.12  0.50	Poor Slope Shrink-swell	 0.00 0.94
69: Dworshak-----	80	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.37 0.12  0.50	Poor Slope Shrink-swell	 0.00 0.94



# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
69: Brequito-----	15	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37		
		Low organic matter content	0.12		
		Too acid	0.50		
70: Elkberry-----	45	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.16		
		Water erosion	0.99		
Elkberry, wet-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.16		
		Water erosion	0.99		
71: Elkberry-----	45	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.16		
		Water erosion	0.99		
Dworshak-----	40	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Shrink-swell	0.94
		Low organic matter content	0.12		
		Too acid	0.50		
72: Elkridge-----	55	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Shrink-swell	0.90
		Water erosion	0.90	Cobble content	0.98
Riswold-----	40	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Low strength	0.22
		Water erosion	0.68		
		Low organic matter content	0.88		
73: Elkridge-----	65	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Shrink-swell	0.90
		Water erosion	0.90	Cobble content	0.98
Riswold-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Low strength	0.22
		Water erosion	0.68		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
74: Fico, dry-----	55	Poor Wind erosion Too sandy Low organic matter content Too acid	 0.00 0.06 0.12  0.68	Poor Slope Depth to bedrock	 0.00 0.95
Hucberit, warm-----	35	Poor Wind erosion Too acid Low organic matter content Water erosion	 0.00 0.32 0.12  0.68	Poor Slope	 0.00
75: Fico-----	50	Poor Wind erosion Too sandy Low organic matter content Too acid	 0.00 0.06 0.12  0.68	Poor Slope Depth to bedrock	 0.00 0.95
Weitas-----	40	Poor Wind erosion Too acid Low organic matter content	 0.00 0.54 0.88	Poor Slope	 0.00
76: Flewsie, high precipitation-----	75	Poor Wind erosion Water erosion Low organic matter content Too acid	 0.00 0.37 0.12  0.84	Poor Slope	 0.00
77: Flewsie, low precipitation-----	70	Fair Too acid Low organic matter content Water erosion	 0.32 0.10  0.99	Poor Slope	 0.00
Flewsie, dry-----	20	Fair Too acid Low organic matter content Water erosion	 0.32 0.10  0.99	Poor Slope	 0.00
78: Floodwood-----	75	Poor Wind erosion Water erosion Too acid Low organic matter content	 0.00 0.37 0.84 0.88	Poor Slope	 0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
79: Floodwood, warm-----	45	Poor Wind erosion Too acid Low organic matter content	0.00 0.32 0.88	Poor Slope	0.00
Keeler-----	40	Poor Wind erosion Too acid Low organic matter content	0.00 0.84 0.88	Poor Slope	0.00
80: Floodwood-----	50	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.84 0.88	Poor Slope	0.00
Keeler, warm-----	30	Fair Low organic matter content Water erosion Too acid	0.12 0.68 0.95	Poor Slope	0.00
81: Floodwood-----	50	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.84 0.88	Poor Slope	0.00
Keeler, warm-----	30	Fair Low organic matter content Water erosion Too acid	0.12 0.68 0.95	Poor Slope	0.00
82: Flumecreek-----	85	Poor Wind erosion Low organic matter content Too acid Water erosion Stone content	0.00 0.12 0.54 0.99 0.00	Poor Slope Cobble content	0.00 0.91
83: Flumecreek-----	65	Poor Wind erosion Low organic matter content Too acid Water erosion Stone content	0.00 0.12 0.54 0.99 0.00	Poor Slope Cobble content	0.00 0.91

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
83: Stepoff-----	20	Poor Wind erosion Too acid Low organic matter content	0.00 0.03 0.88	Poor Slope	0.00
Dworshak, dry-----	15	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.37 0.12 0.50	Poor Slope Shrink-swell	0.00 0.94
84: Fordcreek-----	70	Fair Water erosion Low organic matter content	0.99 0.12	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.02 0.94
85: Fordcreek-----	80	Fair Water erosion Low organic matter content	0.99 0.12	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.02 0.94
86: Garveson, high precipitation-----	55	Poor Too sandy Wind erosion Water erosion Low organic matter content Too acid	0.00 0.00 0.37 0.12 0.50	Poor Slope	0.00
Floodwood-----	30	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.84 0.88	Poor Slope	0.00
87: Gramil-----	60	Poor Too clayey Water erosion Too acid Low organic matter content	0.00 0.68 0.54 0.88	Poor Wetness depth Low strength Shrink-swell	0.00 0.10 0.99
Lewhand-----	30	Fair Water erosion Too acid Low organic matter content	0.06 0.50 0.60	Poor Wetness depth	0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
88: Gramil-----	50	Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00
		Water erosion	0.68	Low strength	0.10
		Too acid	0.54	Shrink-swell	0.99
		Low organic matter content	0.88		
Reggear-----	40	Fair		Poor	
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.90	Wetness depth	0.44
		Too acid	0.54	Shrink-swell	0.97
89: Grandad-----	85	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
90: Grandad, dry-----	70	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
Grandad-----	20	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
91: Grandad, dry-----	70	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
Grandad-----	20	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
92: Grandad-----	55	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
Rettig-----	40	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
93: Grandad, wet-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
93: Rettig, wet-----	35	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
94: Grandad, dry-----	45	Poor Wind erosion Too acid Water erosion	0.00 0.32 0.99	Poor Slope	0.00
Scand-----	40	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.32 0.99 0.88	Poor Slope	0.00
95: Grangemont-----	60	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.50 0.50	Poor Low strength	0.00
Kauder-----	35	Poor Wind erosion Low organic matter content Water erosion Too acid	0.00 0.12 0.90 0.68	Poor Wetness depth Low strength	0.20 0.00
96: Grangemont, dry----	50	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.50 0.50	Poor Low strength	0.00
Kauder, dry-----	40	Poor Wind erosion Low organic matter content Water erosion Too acid	0.00 0.12 0.90 0.68	Poor Wetness depth Low strength	0.20 0.00
97: Grangemont-----	60	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.50 0.50	Poor Low strength	0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
97: Kauder, moist-----	30	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.20
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.90		
		Too acid	0.68		
98: Grangemont, wet-----	45	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Water erosion	0.37	Slope	0.50
		Too acid	0.50		
		Low organic matter content	0.50		
Riswold-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.68	Low strength	0.22
		Too acid	0.68		
		Low organic matter content	0.88		
99: Grasshopper-----	80	Poor		Fair	
		Wind erosion	0.00	Wetness depth	0.08
		Too acid	0.95		
100: Gwin-----	45	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Cobble content	0.96	Cobble content	0.22
Kettenbach-----	40	Fair		Poor	
		Droughty	0.08	Depth to bedrock	0.00
		Cobble content	0.78	Slope	0.00
		Depth to bedrock	0.93	Cobble content	0.01
				Shrink-swell	0.87
101: Gwin-----	45	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Cobble content	0.22
		Cobble content	0.96	Slope	0.82
Kettenbach-----	30	Fair		Poor	
		Droughty	0.08	Depth to bedrock	0.00
		Cobble content	0.78	Cobble content	0.01
		Depth to bedrock	0.93	Slope	0.82
				Shrink-swell	0.87
Keuterville-----	20	Good		Fair	
				Slope	0.82

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
102: Hildebrand-----	55	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.46 0.68 0.88	Fair Wetness depth	0.94
Spacecreek, dry-----	35	Poor Wind erosion Low organic matter content Too acid Water erosion	0.00 0.02 0.32 0.90	Fair Wetness depth	0.94
103: Hubub, wet-----	75	Poor Wind erosion Low organic matter content Too acid Water erosion	0.00 0.12 0.32 0.99	Poor Slope Low strength	0.00 0.00
104: Hubub, wet-----	65	Poor Wind erosion Low organic matter content Too acid Water erosion	0.00 0.12 0.32 0.99	Poor Low strength	0.00
Dworshak-----	30	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.37 0.12 0.50	Fair Shrink-swell	0.94
105: Hubub-----	65	Poor Wind erosion Low organic matter content Too acid Water erosion	0.00 0.12 0.32 0.99	Poor Low strength Slope	0.00 0.50
Lostpete-----	20	Poor Wind erosion Low organic matter content Too acid Water erosion	0.00 0.12 0.32 0.68	Poor Slope Low strength Shrink-swell	0.00 0.00 0.95
106: Hucberit-----	85	Poor Wind erosion Too acid Low organic matter content Water erosion	0.00 0.32 0.12 0.68	Poor Slope	0.00



# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
107: Hucberit-----	40	Poor Wind erosion Too acid Low organic matter content Water erosion	 0.00 0.32 0.12 0.68	Poor Slope	 0.00
Vaywood, high precipitation-----	35	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12 0.32 0.90	Poor Slope Cobble content	 0.00 0.99
108: Hugus-----	85	Poor Wind erosion Water erosion Too acid Low organic matter content	 0.00 0.37 0.32 0.88	Poor Slope	 0.00
109: Hugus-----	90	Poor Wind erosion Water erosion Too acid Low organic matter content	 0.00 0.37 0.32 0.88	Poor Slope	 0.00
110: Hugus, moist-----	75	Poor Wind erosion Water erosion Too acid Low organic matter content	 0.00 0.37 0.32 0.88	Poor Slope	 0.00
111: Hugus, high precipitation-----	75	Poor Wind erosion Water erosion Too acid Low organic matter content	 0.00 0.37 0.32 0.88	Poor Slope	 0.00
112: Hugus, moist-----	75	Poor Wind erosion Water erosion Too acid Low organic matter content	 0.00 0.37 0.32 0.88	Poor Slope	 0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
112: Hugus-----	15	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37		
		Too acid	0.32		
		Low organic matter content	0.88		
113: Hugus-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37		
		Too acid	0.32		
		Low organic matter content	0.88		
Dworshak-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Shrink-swell	0.94
		Low organic matter content	0.12		
		Too acid	0.50		
114: Itzee-----	90	Fair		Good	
		Too sandy	0.06		
		Droughty	0.96		
115: Jacket-----	80	Fair		Poor	
		Too clayey	0.01	Low strength	0.00
		Low organic matter content	0.12	Shrink-swell	0.28
		Water erosion	0.99	Slope	0.32
116: Jacket-----	85	Fair		Poor	
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88	Shrink-swell	0.36
		Too clayey	0.98		
117: Jacket-----	45	Fair		Poor	
		Too clayey	0.01	Low strength	0.00
		Low organic matter content	0.12	Slope	0.00
		Water erosion	0.99	Shrink-swell	0.28
Wellsbench-----	35	Fair		Poor	
		Too clayey	0.01	Slope	0.00
		Droughty	0.79	Low strength	0.00
		Cobble content	0.87	Depth to bedrock	0.01
				Cobble content	0.08
				Shrink-swell	0.87

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
118: Jacot-----	45	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.32 0.88	Poor Slope	0.00
Garveson-----	35	Poor Too sandy Wind erosion Water erosion Low organic matter content Too acid	0.00 0.00 0.37 0.12 0.50	Poor Slope	0.00
119: Jacot-----	45	Poor Wind erosion Water erosion Too acid Low organic matter content	0.00 0.37 0.32 0.88	Poor Slope	0.00
Garveson-----	35	Poor Too sandy Wind erosion Water erosion Low organic matter content Too acid	0.00 0.00 0.37 0.12 0.50	Poor Slope	0.00
120: Jaype-----	50	Poor Wind erosion Low organic matter content Water erosion Too acid	0.00 0.12 0.68 0.46	Poor Low strength Slope Shrink-swell	0.00 0.08 0.91
Revling-----	35	Poor Wind erosion Low organic matter content Too acid Water erosion	0.00 0.12 0.50 0.99	Fair Slope Low strength	0.08 0.22
121: Jaype, dry-----	65	Poor Wind erosion Low organic matter content Water erosion Too acid	0.00 0.12 0.68 0.46	Poor Slope Low strength Shrink-swell	0.00 0.00 0.91

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
121: Revling, dry-----	15	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12	Low strength	0.22
		Too acid	0.50		
		Water erosion	0.99		
122: Jaype-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.68	Shrink-swell	0.91
		Too acid	0.46		
Statemeadow-----	25	Fair		Poor	
		Too acid	0.32	Low strength	0.00
		Water erosion	0.68	Slope	0.00
123: Joel-----	50	Fair		Poor	
		Low organic matter content	0.18	Low strength	0.00
		Too acid	0.92		
Setters-----	30	Fair		Poor	
		Too acid	0.50	Wetness depth	0.00
		Low organic matter content	0.88	Low strength	0.00
				Shrink-swell	0.79
124: Johnson-----	75	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.18	Low strength	0.00
				Depth to bedrock	0.87
				Shrink-swell	0.97
125: Johnson-----	55	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.18	Low strength	0.00
				Depth to bedrock	0.87
				Shrink-swell	0.97
Swayne-----	25	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too clayey	0.18	Shrink-swell	0.28
		Too acid	0.99	Low strength	0.00
126: Johnson-----	45	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.18	Low strength	0.00
				Depth to bedrock	0.87
				Shrink-swell	0.97

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
126: Swayne-----	40	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too clayey	0.18	Shrink-swell	0.28
		Too acid	0.99	Low strength	0.00
127: Johnson-----	50	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.18	Low strength	0.00
				Depth to bedrock	0.87
				Shrink-swell	0.97
Texascreek-----	35	Fair		Poor	
		Droughty	0.81	Depth to bedrock	0.00
		Depth to bedrock	0.79	Slope	0.00
		Too acid	0.95		
128: Jury-----	80	Poor		Fair	
		Wind erosion	0.00	Slope	0.50
		Too acid	0.84		
129: Jury-----	85	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
130: Jury, cold-----	90	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
131: Jury-----	55	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
Weitas-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.54		
		Low organic matter content	0.88		
132: Jury-----	60	Poor		Good	
		Wind erosion	0.00		
		Too acid	0.84		
Weitas-----	30	Poor		Good	
		Wind erosion	0.00		
		Too acid	0.54		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
133: Kauder-----	80	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.20
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.90		
		Too acid	0.68		
134: Keeler, dry-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
		Low organic matter content	0.88		
Keeler-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
		Low organic matter content	0.88		
135: Keeler, moist-----	65	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
		Low organic matter content	0.88		
Keeler-----	20	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
		Low organic matter content	0.88		
136: Keeler-----	55	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
		Low organic matter content	0.88		
Aldermand-----	30	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.32		
		Stone content	0.72		
137: Keeler-----	50	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Water erosion	0.68		
		Too acid	0.95		
Jacot-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37		
		Too acid	0.32		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill
		Rating class and limiting features	Rating class and limiting features
138: Keeler-----	55	Poor Wind erosion 0.00 Too acid 0.84 Low organic matter content 0.88	Fair Slope 0.08
Lado-----	20	Poor Wind erosion 0.00 Water erosion 0.99	Fair Slope 0.08 Low strength 0.22
139: Kettenbach-----	40	Fair Droughty 0.08 Cobble content 0.78 Depth to bedrock 0.93	Poor Depth to bedrock 0.00 Slope 0.00 Cobble content 0.01 Shrink-swell 0.87
Gwin-----	35	Poor Droughty 0.00 Depth to bedrock 0.00 Cobble content 0.96	Poor Depth to bedrock 0.00 Slope 0.00 Cobble content 0.22
Rock outcrop-----	15	Not rated	Not rated
140: Kettenbach-----	45	Fair Droughty 0.08 Cobble content 0.78 Depth to bedrock 0.93	Poor Depth to bedrock 0.00 Slope 0.00 Cobble content 0.01 Shrink-swell 0.87
Keuterville-----	30	Good	Poor Slope 0.00
141: Keuterville-----	80	Good	Fair Slope 0.82
142: Keuterville-----	65	Good	Poor Slope 0.00
143: Keuterville-----	65	Fair Droughty 0.94 Not too clayey 1.00	Poor Slope 0.00 Low strength 0.78
Rock outcrop-----	20	Not rated	Not rated
144: Klickson-----	85	Fair Low organic matter content 0.12 Too acid 0.50 Water erosion 0.99	Poor Slope 0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
145: Klickson-----	70	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.50		
		Water erosion	0.99		
146: Klickson-----	50	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.50		
		Water erosion	0.99		
Agatha-----	35	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Cobble content	0.55	Cobble content	0.10
		Low organic matter content	0.88		
		Too clayey	0.98		
147: Klickson-----	50	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.50		
		Water erosion	0.99		
Kettenbach-----	30	Fair		Poor	
		Droughty	0.08	Depth to bedrock	0.00
		Cobble content	0.78	Slope	0.00
		Depth to bedrock	0.93	Cobble content	0.01
				Shrink-swell	0.87
148: Klickson-----	50	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.50		
		Water erosion	0.99		
Rock outcrop-----	20	Not rated		Not rated	
Kettenbach-----	15	Fair		Poor	
		Droughty	0.08	Depth to bedrock	0.00
		Cobble content	0.78	Slope	0.00
		Depth to bedrock	0.93	Cobble content	0.01
				Shrink-swell	0.87
149: Konkol-----	45	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Water erosion	0.99	Slope	0.02
		Too acid	0.08		
		Low organic matter content	0.68		



# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
149: Revling-----	25	Poor		Fair	
		Wind erosion	0.00	Slope	0.08
		Low organic matter content	0.12	Low strength	0.22
		Too acid	0.50		
		Water erosion	0.99		
150: Kooskia-----	80	Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.68	Shrink-swell	0.27
		Too acid	0.92		
151: Kooskia-----	80	Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.68	Shrink-swell	0.27
		Too acid	0.92		
152: Kruse-----	85	Fair		Poor	
		Too acid	0.32	Low strength	0.00
		Water erosion	0.99	Slope	0.00
		Low organic matter content	0.88	Shrink-swell	0.99
153: Kruse-----	75	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		
154: Kruse-----	50	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		
Aldermand-----	40	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.32		
		Stone content	0.72		
155: Kruse-----	50	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
155: Aldermand-----	35	Fair		Poor	
		Low organic matter content	0.12	Slope	0.00
		Too acid	0.32		
		Stone content	0.72		
156: Kruse-----	55	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		
McCrosket, dry-----	40	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Cobble content	0.03	Cobble content	0.00
		Low organic matter content	0.50	Depth to bedrock	0.39
		Droughty	0.98		
157: Kruse-----	70	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		
Noil-----	20	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.08	Depth to bedrock	0.07
		Droughty	0.71	Cobble content	0.43
158: Kruse-----	45	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88		
Teakean-----	40	Fair		Poor	
		Too acid	0.32	Wetness depth	0.32
		Low organic matter content	0.12	Slope	0.00
		Water erosion	0.90	Low strength	0.22
		Too clayey	0.92	Shrink-swell	0.90
159: Larkin-----	50	Good		Poor	
				Slope	0.00
				Low strength	0.00
				Shrink-swell	0.96
Driscoll-----	35	Poor		Poor	
		Too clayey	0.00	Slope	0.00
		Water erosion	0.68	Low strength	0.00
		Low organic matter content	0.88	Wetness depth	0.18
		Too acid	0.95	Shrink-swell	0.43

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
160: Lebaron-----	45	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.00
		Water erosion	0.68	Low strength	0.00
		Too acid	0.74		
		Too clayey	0.82		
Latahco-----	40	Fair		Poor	
		Water erosion	0.37	Wetness depth	0.00
		Low organic matter content	0.88	Low strength	0.00
				Shrink-swell	0.98
161: Lewhand-----	65	Fair		Poor	
		Water erosion	0.06	Wetness depth	0.00
		Too acid	0.50		
		Low organic matter content	0.60		
Burntcreek-----	20	Fair		Poor	
		Too acid	0.74	Wetness depth	0.00
		Water erosion	0.99		
		Low organic matter content	0.88		
162: Lewhand-----	80	Fair		Poor	
		Water erosion	0.06	Wetness depth	0.00
		Too acid	0.50		
		Low organic matter content	0.60		
Teneb-----	15	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.00
		Water erosion	0.68	Low strength	0.00
		Too acid	0.54	Shrink-swell	0.87
		Too clayey	0.88		
		Low organic matter content	0.88		
163: Longbar-----	55	Fair		Poor	
		Too acid	0.54	Slope	0.00
Bigtalk-----	35	Fair		Poor	
		Too acid	0.84	Slope	0.00
		Low organic matter content	0.88		
164: Longbar-----	55	Fair		Poor	
		Too acid	0.54	Slope	0.00
Bigtalk-----	35	Fair		Poor	
		Too acid	0.84	Slope	0.00
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
165: Longpen-----	75	Fair		Poor	
		Too acid	0.95	Slope	0.00
		Water erosion	0.99	Low strength	0.00
				Shrink-swell	0.96
166: Longpen-----	60	Fair		Poor	
		Too acid	0.95	Low strength	0.00
		Water erosion	0.99	Shrink-swell	0.96
167: Meland-----	50	Fair		Poor	
		Depth to bedrock	0.90	Depth to bedrock	0.00
		Too acid	0.95	Low strength	0.00
		Too clayey	0.98	Shrink-swell	0.97
Jacket-----	40	Fair		Poor	
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88	Shrink-swell	0.36
		Too clayey	0.98		
168: Meland-----	55	Fair		Poor	
		Depth to bedrock	0.90	Depth to bedrock	0.00
		Too acid	0.95	Low strength	0.00
		Too clayey	0.98	Slope	0.82
				Shrink-swell	0.97
Keuterville-----	30	Fair		Poor	
		Droughty	0.94	Slope	0.00
		Not too clayey	1.00	Low strength	0.78
169: Mushel-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12		
		Too acid	0.32		
Brodeer-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.68		
		Low organic matter content	0.88		
		Too acid	0.92		
170: Mushel-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12		
		Too acid	0.32		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
170: Dullaxe-----	45	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.12		
		Too acid	0.74		
		Water erosion	0.90		
171: Nakarna, high precipitation-----	75	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Depth to bedrock	0.46
		Too acid	0.50		
		Low organic matter content	0.88		
172: Nakarna, high precipitation-----	75	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.04
		Water erosion	0.99		
		Low organic matter content	0.88		
173: Nakarna-----	45	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.04
		Water erosion	0.99		
		Low organic matter content	0.88		
Nakarna, warm-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.04
		Water erosion	0.99		
		Low organic matter content	0.88		
174: Narnett-----	60	Fair		Poor	
		Water erosion	0.37	Low strength	0.00
		Low organic matter content	0.12	Slope	0.50
		Too acid	0.74	Shrink-swell	0.98
Jury-----	20	Poor		Fair	
		Wind erosion	0.00	Slope	0.50
		Too acid	0.84		
175: Neva-----	80	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Low strength	0.00
		Water erosion	0.68		
		Low organic matter content	0.98		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
176: Newlig-----	85	Fair		Poor	
		Water erosion	0.90	Low strength	0.00
		Low organic matter content	0.88	Shrink-swell	0.98
		Too acid	0.97		
177: Noil-----	45	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.08	Depth to bedrock	0.07
		Droughty	0.71	Cobble content	0.43
Keeler-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.84		
		Low organic matter content	0.88		
178: Noil-----	70	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Low organic matter content	0.08	Depth to bedrock	0.07
		Droughty	0.71	Cobble content	0.43
Bouldercreek, warm--	15	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.18		
		Too acid	0.32		
Rock outcrop-----	15	Not rated		Not rated	
179: Norwidge, moist----	50	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Too acid	0.16	Shrink-swell	0.98
		Low organic matter content	0.10		
		Water erosion	0.99		
Threebear, moist----	45	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Too acid	0.54	Wetness depth	0.20
		Water erosion	0.99	Shrink-swell	0.98
		Low organic matter content	0.60		
180: Odonnell-----	65	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.20
		Low organic matter content	0.12	Low strength	0.00
		Water erosion	0.90	Slope	0.82
		Too acid	0.95		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
180: Grandad-----	15	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
181: Odonnell-----	75	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.20
		Water erosion	0.37	Slope	0.00
		Low organic matter content	0.12	Low strength	0.00
		Too acid	0.84		
182: Oxyaquic Xerofluvents, occasionally flooded-----	70	Fair		Poor	
		Too sandy	0.09	Wetness depth	0.00
		Water erosion	0.37		
		Too acid	0.74		
		Low organic matter content	0.88		
Itzee-----	15	Fair		Good	
		Too sandy	0.06		
		Droughty	0.96		
183: Pits, quarry-----	100	Not rated		Not rated	
184: Placer-----	40	Fair		Poor	
		Too acid	0.50	Slope	0.00
		Water erosion	0.99	Depth to bedrock	0.74
		Low organic matter content	0.88		
Dowper-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.68	Low strength	0.78
		Too acid	0.84	Shrink-swell	0.96
		Low organic matter content	0.88		
Grangemont-----	15	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Water erosion	0.37	Slope	0.50
		Too acid	0.50		
		Low organic matter content	0.50		
185: Poorman, dry-----	70	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
186: Poorman, dry-----	60	Poor Wind erosion Too acid Low organic matter content	0.00 0.32 0.88	Poor Slope	0.00
Poorman-----	30	Poor Wind erosion Too acid Low organic matter content	0.00 0.32 0.88	Poor Slope	0.00
187: Poorman-----	55	Poor Wind erosion Too acid Low organic matter content	0.00 0.32 0.88	Poor Slope	0.00
Grandad-----	35	Poor Wind erosion Too acid Water erosion	0.00 0.32 0.99	Poor Slope	0.00
188: Poorman-----	50	Poor Wind erosion Too acid Low organic matter content	0.00 0.32 0.88	Poor Slope	0.00
Grandad-----	40	Poor Wind erosion Too acid Water erosion	0.00 0.32 0.99	Poor Slope	0.00
189: Poorman-----	75	Poor Wind erosion Too acid Low organic matter content	0.00 0.32 0.88	Poor Slope	0.00
Grandad, dry-----	20	Poor Wind erosion Too acid Water erosion	0.00 0.32 0.99	Poor Slope	0.00
190: Poorman-----	40	Poor Wind erosion Too acid Low organic matter content	0.00 0.32 0.88	Poor Slope	0.00
Grandad, dry-----	35	Poor Wind erosion Too acid Water erosion	0.00 0.32 0.99	Poor Slope	0.00



# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
191: Reggear-----	55	Fair Low organic matter content Water erosion Too acid	0.12 0.90 0.54	Poor Low strength Wetness depth Shrink-swell	0.00 0.44 0.97
Kauder-----	25	Poor Wind erosion Low organic matter content Water erosion Too acid	0.00 0.12 0.90 0.68	Poor Wetness depth Low strength	0.20 0.00
192: Reggear-----	50	Fair Low organic matter content Water erosion Too acid	0.12 0.90 0.54	Poor Low strength Wetness depth Shrink-swell	0.00 0.44 0.97
Seddow-----	30	Fair Too acid Low organic matter content	0.88 0.88	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.12 0.99
193: Rettig, high elevation-----	80	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
194: Rettig-----	80	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
195: Rettig, cold-----	90	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
196: Rettig, cool-----	50	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
Rettig, dry-----	40	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
197: Rettig-----	45	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
Grandad-----	30	Poor Wind erosion Too acid Water erosion	0.00 0.32 0.99	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
198: Rettig, warm, dry---	60	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
Township-----	25	Poor Wind erosion Stone content Too acid Water erosion Low organic matter content	0.00 0.03 0.32 0.90 0.88	Poor Slope Stones Cobble content	0.00 0.43 0.59
199: Rettig-----	40	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
Township, wet-----	25	Poor Wind erosion Stone content Too acid Water erosion Low organic matter content	0.00 0.03 0.32 0.90 0.88	Poor Slope Stones Cobble content	0.00 0.43 0.59
Stepoff-----	15	Poor Wind erosion Too acid Low organic matter content	0.00 0.03 0.88	Poor Slope	0.00
200: Riswold-----	50	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.32 0.68 0.88	Fair Low strength	0.22
Cranberry-----	45	Poor Wind erosion Water erosion Low organic matter content Too acid	0.00 0.37 0.12 0.32	Poor Low strength Shrink-swell	0.00 0.93
201: Riswold-----	45	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.32 0.68 0.88	Poor Slope Low strength	0.00 0.22

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
201: Grangemont-----	40	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Water erosion	0.37	Slope	0.50
		Too acid	0.50		
		Low organic matter content	0.50		
202: Rock outcrop-----	35	Not rated		Not rated	
Whiskeycreek-----	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.01		
		Low organic matter content	0.88		
Texascreek, dry-----	25	Fair		Poor	
		Droughty	0.81	Depth to bedrock	0.00
		Depth to bedrock	0.79	Slope	0.00
		Too acid	0.95		
203: Scaler-----	85	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.18		
		Too acid	0.32		
		Water erosion	0.99		
204: Scaler-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.18		
		Too acid	0.32		
		Water erosion	0.99		
Grandad-----	20	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
		Water erosion	0.99		
205: Scaler-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Low organic matter content	0.18		
		Too acid	0.32		
		Water erosion	0.99		
Grangemont-----	30	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Low strength	0.00
		Too acid	0.50		
		Low organic matter content	0.50		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
206: Scand-----	65	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.32 0.99 0.88	Poor Slope	0.00
Scaler-----	15	Poor Wind erosion Low organic matter content Too acid Water erosion	0.00 0.18 0.32 0.99	Poor Slope	0.00
207: Seddow-----	75	Fair Too acid Low organic matter content	0.88 0.88	Poor Low strength Depth to bedrock Slope Shrink-swell	0.00 0.12 0.50 0.99
208: Seddow-----	85	Fair Too acid Low organic matter content	0.88 0.88	Poor Slope Low strength Depth to bedrock Shrink-swell	0.00 0.00 0.12 0.99
209: Seddow-----	80	Fair Too acid Low organic matter content	0.88 0.88	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.12 0.99
210: Setters-----	80	Fair Too acid Low organic matter content	0.50 0.88	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.79
211: Shattuck-----	90	Poor Wind erosion Too acid Water erosion Stone content	0.00 0.50 0.90 0.97	Poor Slope	0.00
212: Shattuck-----	90	Poor Wind erosion Too acid Water erosion Stone content	0.00 0.50 0.90 0.97	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
213: Shattuck, moist-----	90	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.50		
		Water erosion	0.90		
		Stone content	0.97		
214: Shattuck, moist-----	50	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.50		
		Water erosion	0.90		
		Stone content	0.97		
Dworshak, moist-----	40	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Shrink-swell	0.94
		Low organic matter content	0.12		
		Too acid	0.50		
215: Shattuck-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.50		
		Water erosion	0.90		
		Stone content	0.97		
Dworshak-----	35	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Water erosion	0.37	Shrink-swell	0.94
		Low organic matter content	0.12		
		Too acid	0.50		
216: Sly-----	80	Fair		Fair	
		Low organic matter content	0.12	Shrink-swell	0.98
		Too acid	0.68		
		Water erosion	0.99		
Wilkins-----	15	Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00
		Water erosion	0.37	Low strength	0.00
		Low organic matter content	0.12	Shrink-swell	0.00
217: Southwick-----	85	Fair		Poor	
		Water erosion	0.99	Low strength	0.00
		Low organic matter content	0.88	Wetness depth	0.14
				Shrink-swell	0.98
218: Southwick-----	45	Fair		Poor	
		Water erosion	0.06	Low strength	0.00
		Low organic matter content	0.12	Wetness depth	0.14
				Shrink-swell	0.93
		Too acid	0.95	Slope	0.98

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
218: Larkin-----	40	Fair Water erosion	0.90	Poor Low strength Slope Shrink-swell	0.00 0.68 0.95
219: Statemeadow-----	65	Fair Too acid Water erosion	0.32 0.68	Poor Low strength	0.00
Reggear-----	25	Fair Low organic matter content Water erosion Too acid	0.12 0.90 0.54	Poor Low strength Wetness depth Shrink-swell	0.00 0.44 0.97
220: Swayne-----	85	Fair Low organic matter content Too clayey Too acid	0.12 0.18 0.99	Poor Shrink-swell Low strength	0.28 0.00
221: Taney-----	80	Fair Water erosion Too acid	0.37 0.84	Poor Low strength Wetness depth	0.00 0.07
222: Taney-----	50	Fair Water erosion Low organic matter content Too acid	0.06 0.12 0.84	Poor Low strength Wetness depth Shrink-swell	0.00 0.76 0.93
Joel-----	35	Fair Water erosion Low organic matter content	0.68 0.88	Poor Low strength Shrink-swell	0.00 0.98
223: Taney-----	65	Fair Water erosion Too acid	0.37 0.84	Poor Low strength Wetness depth Slope	0.00 0.07 0.00
McCrosket-----	25	Fair Too acid Cobble content Low organic matter content Droughty	0.50 0.03 0.50 0.98	Poor Slope Cobble content Depth to bedrock	0.00 0.00 0.39
224: Taney-----	55	Fair Water erosion Too acid	0.37 0.84	Poor Low strength Wetness depth	0.00 0.07

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
224: Setters-----	35	Fair		Poor	
		Too acid	0.50	Wetness depth	0.00
		Low organic matter content	0.88	Low strength	0.00
				Shrink-swell	0.79
225: Taney-----	40	Fair		Poor	
		Water erosion	0.37	Low strength	0.00
		Too acid	0.84	Wetness depth	0.07
Setters-----	40	Fair		Poor	
		Too acid	0.50	Wetness depth	0.00
		Low organic matter content	0.88	Low strength	0.00
				Shrink-swell	0.79
226: Teakean-----	80	Fair		Poor	
		Too acid	0.32	Slope	0.00
		Low organic matter content	0.12	Wetness depth	0.32
		Water erosion	0.90	Low strength	0.22
		Too clayey	0.92	Shrink-swell	0.90
227: Teneb-----	85	Poor		Poor	
		Wind erosion	0.00	Wetness depth	0.00
		Water erosion	0.68	Low strength	0.00
		Too acid	0.54	Shrink-swell	0.87
		Too clayey	0.88		
		Low organic matter content	0.88		
228: Texascreek-----	55	Fair		Poor	
		Droughty	0.81	Depth to bedrock	0.00
		Depth to bedrock	0.79	Slope	0.00
		Too acid	0.95		
Rock outcrop-----	25	Not rated		Not rated	
229: Texascreek, dry-----	45	Fair		Poor	
		Droughty	0.81	Depth to bedrock	0.00
		Depth to bedrock	0.79	Slope	0.00
		Too acid	0.95		
Whiskeycreek-----	35	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Too sandy	0.01		
		Low organic matter content	0.88		

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
230: Norwidge-----	45	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Too acid	0.16	Shrink-swell	0.98
		Low organic matter content	0.10		
		Water erosion	0.99		
Threebear-----	45	Poor		Poor	
		Wind erosion	0.00	Low strength	0.00
		Too acid	0.32	Wetness depth	0.18
		Water erosion	0.99	Shrink-swell	0.98
		Low organic matter content	0.60		
231: Tomodo-----	80	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Low strength	0.00
		Water erosion	0.90		
		Low organic matter content	0.60		
232: Tomodo-----	60	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Low strength	0.00
		Water erosion	0.90		
		Low organic matter content	0.60		
Lado-----	15	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32	Low strength	0.22
		Water erosion	0.99		
233: Township-----	55	Poor		Poor	
		Wind erosion	0.00	Stones	0.43
		Stone content	0.03	Slope	0.00
		Too acid	0.32	Cobble content	0.59
		Water erosion	0.90		
		Low organic matter content	0.88		
Rettig-----	25	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Too acid	0.32		
234: Township-----	65	Poor		Poor	
		Wind erosion	0.00	Slope	0.00
		Stone content	0.03	Stones	0.43
		Too acid	0.32	Cobble content	0.59
		Water erosion	0.90		
		Low organic matter content	0.88		



# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
234: Rettig-----	25	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
235: Township, dry-----	45	Poor Wind erosion Stone content Too acid Water erosion Low organic matter content	0.00 0.03 0.32 0.90 0.88	Poor Slope Stones Cobble content	0.00 0.43 0.59
Rettig, low precipitation-----	25	Poor Wind erosion Too acid	0.00 0.32	Poor Slope	0.00
Nakarna, dry-----	20	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.50 0.99 0.88	Poor Slope Depth to bedrock	0.00 0.04
236: Trappercreek-----	50	Poor Wind erosion Too acid Water erosion Low organic matter content	0.00 0.84 0.99 0.88	Poor Low strength Shrink-swell	0.00 0.95
Narnett-----	35	Fair Water erosion Low organic matter content Too acid	0.37 0.12 0.74	Poor Low strength Shrink-swell	0.00 0.98
237: Uvi-----	65	Fair Too acid Low organic matter content	0.32 0.88	Poor Slope	0.00
238: Uvi-----	90	Fair Water erosion Low organic matter content Too acid	0.90 0.88 0.95	Poor Slope	0.00

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
239: Vaywood, high precipitation-----	60	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.32 0.90	Poor Slope Cobble content	 0.00 0.99   
Vaywood, dry-----	30	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.32 0.90	Poor Slope Cobble content	 0.00 0.99   
240: Vaywood-----	85	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.32 0.90	Poor Slope Cobble content	 0.00 0.99   
241: Vaywood-----	65	Poor Wind erosion Low organic matter content Too acid Water erosion	 0.00 0.12  0.32 0.90	Poor Slope Cobble content	 0.00 0.99   
Handoff-----	20	Poor Wind erosion Too acid Water erosion Low organic matter content Stone content	 0.00 0.54 0.99 0.88 0.94	Poor Slope	 0.00     
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Fair Too clayey Droughty Cobble content	 0.01 0.79 0.87	Poor Low strength Depth to bedrock Cobble content Shrink-swell	 0.00 0.01 0.08 0.87
244: Wellsbench-----	50	Fair Too clayey Droughty Cobble content	 0.01 0.79 0.87	Poor Slope Low strength Depth to bedrock Cobble content Shrink-swell	 0.00 0.00 0.01 0.08 0.87

# Soil Survey of Clearwater Area, Idaho

Table 24.—Source of Reclamation Material and Roadfill—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
244: Lacy-----	30	Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.00
		Cobble content	0.18	Cobble content	0.00
		Too acid	0.99		
245: Wilkins-----	85	Poor		Poor	
		Too clayey	0.00	Wetness depth	0.00
		Water erosion	0.37	Low strength	0.00
		Low organic matter content	0.12	Shrink-swell	0.00

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1: Agatha, very rocky--	70	Very limited Slope Seepage	1.00 0.70	Somewhat limited Large stones	0.16
Rock outcrop-----	15	Not rated		Not rated	
2: Agatha-----	80	Very limited Slope Seepage	1.00 0.70	Somewhat limited Large stones	0.16
3: Agatha-----	75	Very limited Slope Seepage	1.00 0.70	Somewhat limited Large stones	0.16
4: Ahsahka-----	45	Very limited Slope Seepage	1.00 0.53	Not limited	
Fordcreek-----	40	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.01	Somewhat limited Piping Thin layer	0.15 0.40
5: Ahsahka-----	50	Very limited Slope Seepage	1.00 0.53	Not limited	
Whiskeycreek-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Seepage Thin layer	1.00 1.00
6: Aldermant-----	85	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
7: Aldermant-----	90	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
8: Aldermant, dry-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9: Aquandic Cryaquepts	90	Very limited Seepage	1.00	Very limited Depth to saturated zone	1.00
10: Aquandic Endoaquepts	60	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 1.00
Aquandic Dystrudepts	20	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00
11: Bandmill, dry-----	40	Very limited Slope Seepage	1.00 0.95	Somewhat limited Piping	0.29
Grangemont-----	30	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
Bargamin-----	25	Very limited Slope Seepage	1.00 0.03	Somewhat limited Piping	0.32
12: Bandmill-----	40	Very limited Slope Seepage	1.00 0.95	Somewhat limited Piping	0.29
Riswold-----	30	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.78
13: Berthahill, moist---	75	Very limited Slope Seepage	1.00 0.70	Not limited	
Handoff-----	15	Very limited Seepage Slope	1.00 1.00	Not limited	
14: Berthahill-----	70	Very limited Slope Seepage	1.00 0.70	Not limited	
Handoff-----	20	Very limited Seepage Slope	1.00 1.00	Not limited	
15: Berthahill-----	65	Very limited Slope Seepage	1.00 0.70	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
15: Shattuck-----	15	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.36
16: Bigtalk, cool-----	60	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Bigtalk, wet-----	25	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
17: Bigtalk-----	80	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
18: Bigtalk, cool-----	50	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Floodwood, cool-----	40	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
19: Bigtalk, cool-----	75	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Keeler, cool-----	20	Very limited Slope Seepage	1.00 1.00	Not limited	
20: Bouldercreek, moist	85	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23
21: Bouldercreek-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.83
22: Bouldercreek-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.83
23: Bouldercreek, moist	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23
Brodeer-----	15	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
24: Bouldercreek-----	65	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23
Brodeer-----	25	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
25: Bouldercreek-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23
Judgetown-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Thin layer	0.06
26: Bouldercreek, high precipitation-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.83
Marblecreek-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.83
27: Bouldercreek, cool, dry-----	70	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23
Rettig, cool-----	25	Very limited Seepage Slope	1.00 1.00	Not limited	
28: Brequito, dry-----	65	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
29: Brequito-----	45	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
Grangemont-----	40	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
30: Brequito-----	45	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
Lado, dry-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
31: Brequito-----	60	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
Lado, dry-----	25	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
32: Brequito-----	50	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
Mushel-----	35	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
33: Brequito-----	50	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
Mushel-----	35	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
34: Brodeer, dry-----	55	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Brodeer-----	40	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
35: Brodeer-----	45	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Mushel-----	40	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
36: Brodeer, warm-----	45	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Mushel, dry-----	30	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
37: Brodeer-----	65	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00



# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
37: Bouldercreek-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.23
38: Brodeer-----	50	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Flewsie, dry-----	40	Very limited Slope Seepage	1.00 0.19	Very limited Piping	1.00
39: Brodeer-----	60	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Lostpete-----	35	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
40: Brodeer, moist-----	55	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Lostpete, moist-----	30	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
41: Brodeer, dry-----	50	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Mushel-----	40	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
42: Brodeer-----	60	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Mushel-----	35	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
43: Burntcreek-----	80	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.94
44: Campra-----	80	Very limited Slope Seepage	1.00 0.03	Somewhat limited Seepage	0.93

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
45: Campra-----	45	Very limited Slope Seepage	1.00 0.03	Somewhat limited Seepage	0.93
Sly-----	40	Very limited Slope Seepage	1.00 0.57	Somewhat limited Piping	0.65
46: Carlinton-----	80	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.87
47: Carlinton-----	85	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.87
48: Carlinton-----	50	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.87
Kruse-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.99
49: Carlinton-----	55	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.87
Seddow-----	35	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.29	Somewhat limited Piping Thin layer	0.82 0.29
50: Caseycreek-----	80	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone	0.95
51: Cavendish-----	75	Somewhat limited Slope Seepage	0.32 0.03	Somewhat limited Piping Thin layer	0.07 0.34
52: Cavendish-----	45	Very limited Slope Seepage	1.00 0.03	Somewhat limited Piping Thin layer	0.07 0.34

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52: Taney-----	40	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 1.00
53: Cobbler-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.01
Aldermant-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
54: Cobbler-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.01
Noil-----	45	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Large stones Thin layer	1.00 0.03 0.34
55: Cranberry-----	60	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.84
Riswold-----	20	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.78
56: Crumarine-----	95	Very limited Seepage	1.00	Very limited Depth to saturated zone	1.00
57: Dam-----	100	Not rated		Not rated	
58: Driscoll-----	85	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone	1.00
59: Driscoll-----	45	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone	1.00
Larkin-----	35	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.77

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
60: Dullaxe, high elevation-----	45	Very limited Seepage Slope	1.00 1.00	Not limited	
Dullaxe-----	35	Very limited Seepage Slope	1.00 1.00	Not limited	
61: Dullaxe, dry-----	60	Very limited Seepage Slope	1.00 1.00	Not limited	
Dullaxe, wet-----	35	Very limited Seepage Slope	1.00 1.00	Not limited	
62: Dullaxe-----	50	Very limited Seepage Slope	1.00 1.00	Not limited	
Brodeer-----	35	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
63: Dullaxe-----	60	Very limited Seepage Slope	1.00 1.00	Not limited	
Brodeer-----	25	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
64: Dullaxe-----	60	Very limited Seepage Slope	1.00 1.00	Not limited	
Judgetown-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Thin layer	0.06
65: Dullaxe-----	70	Very limited Seepage Slope	1.00 1.00	Not limited	
Judgetown, moist----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Thin layer	0.06
66: Dullaxe-----	55	Very limited Seepage Slope	1.00 1.00	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
66: Jury, moist-----	30	Very limited Seepage Slope	1.00 1.00	Not limited	
67: Dumps, wood slash---	100	Not rated		Not rated	
68: Dworshak-----	85	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
69: Dworshak-----	80	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
Brequito-----	15	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
70: Elkberry-----	45	Very limited Slope Seepage	1.00 0.05	Very limited Piping	1.00
Elkberry, wet-----	30	Very limited Slope Seepage	1.00 0.05	Very limited Piping	1.00
71: Elkberry-----	45	Very limited Slope Seepage	1.00 0.05	Very limited Piping	1.00
Dworshak-----	40	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
72: Elkridge-----	55	Very limited Slope Seepage	1.00 0.70	Somewhat limited Seepage	0.27
Riswold-----	40	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.78
73: Elkridge-----	65	Very limited Slope Seepage	1.00 0.70	Somewhat limited Seepage	0.27
Riswold-----	30	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.78

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
74: Fico, dry-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage Thin layer	0.77 0.01
Hucberit, warm-----	35	Very limited Seepage Slope	1.00 1.00	Not limited	
75: Fico-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage Thin layer	0.77 0.01
Weitas-----	40	Very limited Seepage Slope	1.00 1.00	Not limited	
76: Flewsie, high precipitation-----	75	Very limited Seepage Slope	1.00 1.00	Not limited	
77: Flewsie, low precipitation-----	70	Very limited Slope Seepage	1.00 0.19	Very limited Piping	1.00
Flewsie, dry-----	20	Very limited Slope Seepage	1.00 0.19	Very limited Piping	1.00
78: Floodwood-----	75	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
79: Floodwood, warm-----	45	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Keeler-----	40	Very limited Slope Seepage	1.00 1.00	Not limited	
80: Floodwood-----	50	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Keeler, warm-----	30	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.89

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
81: Floodwood-----	50	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Keeler, warm-----	30	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.89
82: Flumecreek-----	85	Very limited Seepage Slope	1.00 1.00	Not limited	
83: Flumecreek-----	65	Very limited Seepage Slope	1.00 1.00	Not limited	
Stepoff-----	20	Very limited Seepage Slope	1.00 1.00	Not limited	
Dworshak, dry-----	15	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
84: Fordcreek-----	70	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.01	Somewhat limited Piping Thin layer	0.15 0.40
85: Fordcreek-----	80	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.01	Somewhat limited Piping Thin layer	0.15 0.40
86: Garveson, high precipitation-----	55	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00
Floodwood-----	30	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
87: Gramil-----	60	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00
Lewhand-----	30	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.80

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
88: Gramil-----	50	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone	1.00 1.00
Reggear-----	40	Somewhat limited Seepage Slope	0.70 0.02	Very limited Depth to saturated zone Piping	1.00 0.86
89: Grandad-----	85	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
90: Grandad, dry-----	70	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grandad-----	20	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
91: Grandad, dry-----	70	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grandad-----	20	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
92: Grandad-----	55	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Rettig-----	40	Very limited Seepage Slope	1.00 1.00	Not limited	
93: Grandad, wet-----	60	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Rettig, wet-----	35	Very limited Seepage Slope	1.00 1.00	Not limited	
94: Grandad, dry-----	45	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Scand-----	40	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00



# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
95: Grangemont-----	60	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
Kauder-----	35	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.98
96: Grangemont, dry-----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
Kauder, dry-----	40	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.98
97: Grangemont-----	60	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
Kauder, moist-----	30	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.98
98: Grangemont, wet-----	45	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
Riswold-----	35	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.78
99: Grasshopper-----	80	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.97
100: Gwin-----	45	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones	1.00 0.04
Kettenbach-----	40	Very limited Slope Depth to bedrock Seepage	1.00 0.66 0.03	Somewhat limited Large stones Thin layer	0.22 0.66
101: Gwin-----	45	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones	1.00 0.04

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
101: Kettenbach-----	30	Very limited Slope Depth to bedrock Seepage	1.00 0.66 0.03	Somewhat limited Large stones Thin layer	0.22 0.66
Keuterville-----	20	Very limited Slope Seepage	1.00 0.70	Somewhat limited Seepage	0.12
102: Hildebrand-----	55	Somewhat limited Seepage Slope	0.70 0.32	Very limited Piping Depth to saturated zone	1.00 0.78
Spacecreek, dry-----	35	Somewhat limited Seepage Slope	0.70 0.32	Very limited Piping Depth to saturated zone	1.00 0.78
103: Hubub, wet-----	75	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.95
104: Hubub, wet-----	65	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.95
Dworshak-----	30	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
105: Hubub-----	65	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.95
Lostpete-----	20	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
106: Hucberit-----	85	Very limited Seepage Slope	1.00 1.00	Not limited	
107: Hucberit-----	40	Very limited Seepage Slope	1.00 1.00	Not limited	
Vaywood, high precipitation-----	35	Very limited Seepage Slope	1.00 1.00	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
108: Hugus-----	85	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
109: Hugus-----	90	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
110: Hugus, moist-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
111: Hugus, high precipitation-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
112: Hugus, moist-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Hugus-----	15	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
113: Hugus-----	60	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.11
Dworshak-----	35	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
114: Itzee-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.88
115: Jacket-----	80	Very limited Slope	1.00	Not limited	
116: Jacket-----	85	Very limited Slope Seepage	1.00 0.04	Not limited	
117: Jacket-----	45	Very limited Slope	1.00	Not limited	
Wellsbench-----	35	Very limited Slope Depth to bedrock	1.00 0.42	Somewhat limited Large stones Thin layer	0.11 0.42

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
118: Jacot-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
Garveson-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00
119: Jacot-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
Garveson-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Seepage	1.00
120: Jaype-----	50	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.99
Revling-----	35	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
121: Jaype, dry-----	65	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.99
Revling, dry-----	15	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
122: Jaype-----	50	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.99
Statemeadow-----	25	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.63
123: Joel-----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.52
Setters-----	30	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone	1.00
124: Johnson-----	75	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping Thin layer	0.17 0.03

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
125: Johnson-----	55	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping Thin layer	0.17 0.03
Swayne-----	25	Very limited Slope Seepage	1.00 0.70	Not limited	
126: Johnson-----	45	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping Thin layer	0.17 0.03
Swayne-----	40	Very limited Slope Seepage	1.00 0.70	Not limited	
127: Johnson-----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping Thin layer	0.17 0.03
Texascreek-----	35	Very limited Slope Seepage Depth to bedrock	1.00 1.00 0.06	Somewhat limited Thin layer	0.77
128: Jury-----	80	Very limited Seepage Slope	1.00 1.00	Not limited	
129: Jury-----	85	Very limited Seepage Slope	1.00 1.00	Not limited	
130: Jury, cold-----	90	Very limited Seepage Slope	1.00 1.00	Not limited	
131: Jury-----	55	Very limited Seepage Slope	1.00 1.00	Not limited	
Weitas-----	35	Very limited Seepage Slope	1.00 1.00	Not limited	
132: Jury-----	60	Very limited Seepage Slope	1.00 1.00	Not limited	
Weitas-----	30	Very limited Seepage Slope	1.00 1.00	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
133: Kauder-----	80	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.98
134: Keeler, dry-----	50	Very limited Slope Seepage	1.00 1.00	Not limited	
Keeler-----	30	Very limited Slope Seepage	1.00 1.00	Not limited	
135: Keeler, moist-----	65	Very limited Slope Seepage	1.00 1.00	Not limited	
Keeler-----	20	Very limited Slope Seepage	1.00 1.00	Not limited	
136: Keeler-----	55	Very limited Slope Seepage	1.00 1.00	Not limited	
Aldermand-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
137: Keeler-----	50	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.89
Jacot-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
138: Keeler-----	55	Very limited Slope Seepage	1.00 1.00	Not limited	
Lado-----	20	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
139: Kettenbach-----	40	Very limited Slope Depth to bedrock Seepage	1.00 0.66 0.03	Somewhat limited Large stones Thin layer	0.22 0.66
Gwin-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones	1.00 0.04

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
139: Rock outcrop-----	15	Not rated		Not rated	
140: Kettenbach-----	45	Very limited Slope Depth to bedrock Seepage	1.00 0.66 0.03	Somewhat limited Large stones Thin layer	0.22 0.66
Keuterville-----	30	Very limited Slope Seepage	1.00 0.70	Somewhat limited Seepage	0.12
141: Keuterville-----	80	Very limited Slope Seepage	1.00 0.70	Somewhat limited Seepage	0.12
142: Keuterville-----	65	Very limited Slope Seepage	1.00 0.70	Somewhat limited Seepage	0.12
143: Keuterville-----	65	Very limited Slope Seepage	1.00 0.04	Not limited	
Rock outcrop-----	20	Not rated		Not rated	
144: Klickson-----	85	Very limited Slope Seepage	1.00 0.70	Not limited	
145: Klickson-----	70	Very limited Slope Seepage	1.00 0.70	Not limited	
146: Klickson-----	50	Very limited Slope Seepage	1.00 0.70	Not limited	
Agatha-----	35	Very limited Slope Seepage	1.00 0.70	Somewhat limited Large stones	0.16
147: Klickson-----	50	Very limited Slope Seepage	1.00 0.70	Not limited	
Kettenbach-----	30	Very limited Slope Depth to bedrock Seepage	1.00 0.66 0.03	Somewhat limited Large stones Thin layer	0.22 0.66

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
148:					
Klickson-----	50	Very limited Slope Seepage	1.00 0.70	Not limited	
Rock outcrop-----	20	Not rated		Not rated	
Kettenbach-----	15	Very limited Slope Depth to bedrock Seepage	1.00 0.66 0.03	Somewhat limited Large stones Thin layer	0.22 0.66
149:					
Konkol-----	45	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.76
Revling-----	25	Very limited Slope Seepage	1.00 0.70	Very limited Piping	1.00
150:					
Kooskia-----	80	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone	1.00
151:					
Kooskia-----	80	Somewhat limited Slope Seepage	0.82 0.70	Very limited Depth to saturated zone	1.00
152:					
Kruse-----	85	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.32
153:					
Kruse-----	75	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.99
154:					
Kruse-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.99
Alderland-----	40	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19
155:					
Kruse-----	50	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.99
Alderland-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.19



# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
156: Kruse-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.99
McCrosket, dry-----	40	Very limited Slope Seepage	1.00 0.70	Somewhat limited Large stones Seepage Thin layer	0.84 0.51 0.16
157: Kruse-----	70	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.99
Noil-----	20	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Large stones Thin layer	1.00 0.03 0.34
158: Kruse-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.99
Teakean-----	40	Very limited Slope Seepage	1.00 0.03	Very limited Depth to saturated zone	1.00
159: Larkin-----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.77
Driscoll-----	35	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone	1.00
160: Lebaron-----	45	Not limited		Very limited Depth to saturated zone Piping	1.00 0.94
Latahco-----	40	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.60
161: Lewhand-----	65	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.80
Burntcreek-----	20	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.94

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
162: Lewhand-----	80	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.80
Teneb-----	15	Somewhat limited Seepage	0.53	Very limited Depth to saturated zone Piping	1.00 0.36
163: Longbar-----	55	Very limited Seepage Slope	1.00 1.00	Not limited	
Bigtalk-----	35	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
164: Longbar-----	55	Very limited Seepage Slope	1.00 1.00	Not limited	
Bigtalk-----	35	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
165: Longpen-----	75	Very limited Slope Seepage	1.00 0.03	Somewhat limited Piping	0.31
166: Longpen-----	60	Very limited Slope Seepage	1.00 0.03	Somewhat limited Piping	0.31
167: Meland-----	50	Very limited Slope Depth to bedrock Seepage	1.00 0.69 0.04	Somewhat limited Thin layer Piping	0.70 0.03
Jacket-----	40	Very limited Slope Seepage	1.00 0.04	Not limited	
168: Meland-----	55	Very limited Slope Depth to bedrock Seepage	1.00 0.69 0.04	Somewhat limited Thin layer Piping	0.70 0.03
Keuterville-----	30	Very limited Slope Seepage	1.00 0.04	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
169: Mushel-----	60	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Brodeer-----	30	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
170: Mushel-----	50	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Dullaxe-----	45	Very limited Seepage Slope	1.00 1.00	Not limited	
171: Nakarna, high precipitation-----	75	Very limited Seepage Slope	1.00 1.00	Very limited Piping Thin layer	1.00 0.13
172: Nakarna, high precipitation-----	75	Very limited Seepage Slope	1.00 1.00	Very limited Piping Thin layer	1.00 0.37
173: Nakarna-----	45	Very limited Seepage Slope	1.00 1.00	Very limited Piping Thin layer	1.00 0.37
Nakarna, warm-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Piping Thin layer	1.00 0.37
174: Narnett-----	60	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.97
Jury-----	20	Very limited Seepage Slope	1.00 1.00	Not limited	
175: Neva-----	80	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.99
176: Newlig-----	85	Very limited Slope Seepage	1.00 1.00	Somewhat limited Piping	0.90

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
177:					
Noil-----	45	Very limited Seepage	1.00	Very limited Seepage	1.00
		Slope	1.00	Large stones	0.03
				Thin layer	0.34
Keeler-----	30	Very limited Slope	1.00	Not limited	
		Seepage	1.00		
178:					
Noil-----	70	Very limited Seepage	1.00	Very limited Seepage	1.00
		Slope	1.00	Large stones	0.03
				Thin layer	0.34
Bouldercreek, warm--	15	Very limited Seepage	1.00	Somewhat limited Seepage	0.23
		Slope	1.00		
Rock outcrop-----	15	Not rated		Not rated	
179:					
Norwidge, moist-----	50	Very limited Slope	1.00	Somewhat limited Piping	0.17
		Seepage	0.43		
Threebear, moist----	45	Very limited Slope	1.00	Very limited Depth to saturated	1.00
		Seepage	0.70	zone	
				Piping	0.94
180:					
Odonnell-----	65	Very limited Slope	1.00	Very limited Depth to saturated	1.00
		Seepage	0.03	zone	
				Piping	0.98
Grandad-----	15	Very limited Seepage	1.00	Very limited Piping	1.00
		Slope	1.00		
181:					
Odonnell-----	75	Very limited Slope	1.00	Very limited Depth to saturated	1.00
		Seepage	0.03	zone	
				Piping	1.00
182:					
Oxyaquic Xerofluvents, occasionally flooded-----	70	Very limited Seepage	1.00	Very limited Depth to saturated	1.00
				zone	
				Seepage	0.29
Itzee-----	15	Very limited Seepage	1.00	Somewhat limited Seepage	0.88
		Slope	0.32		

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
183: Pits, quarry-----	100	Not rated		Not rated	
184: Placer-----	40	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping Thin layer	0.79 0.06
Dowper-----	30	Very limited Seepage Slope	1.00 1.00	Somewhat limited Piping	0.94
Grangemont-----	15	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
185: Poorman, dry-----	70	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
186: Poorman, dry-----	60	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Poorman-----	30	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
187: Poorman-----	55	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grandad-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
188: Poorman-----	50	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grandad-----	40	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
189: Poorman-----	75	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grandad, dry-----	20	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
190: Poorman-----	40	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grandad, dry-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
191: Reggear-----	55	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.86
Kauder-----	25	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.98
192: Reggear-----	50	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.86
Seddow-----	30	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.29	Somewhat limited Piping Thin layer	0.82 0.29
193: Rettig, high elevation-----	80	Very limited Seepage Slope	1.00 1.00	Not limited	
194: Rettig-----	80	Very limited Seepage Slope	1.00 1.00	Not limited	
195: Rettig, cold-----	90	Very limited Seepage Slope	1.00 1.00	Not limited	
196: Rettig, cool-----	50	Very limited Seepage Slope	1.00 1.00	Not limited	
Rettig, dry-----	40	Very limited Seepage Slope	1.00 1.00	Not limited	
197: Rettig-----	45	Very limited Seepage Slope	1.00 1.00	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
197: Grandad-----	30	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
198: Rettig, warm, dry---	60	Very limited Seepage Slope	1.00 1.00	Not limited	
Township-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones	0.28
199: Rettig-----	40	Very limited Seepage Slope	1.00 1.00	Not limited	
Township, wet-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones	0.28
Stepoff-----	15	Very limited Seepage Slope	1.00 1.00	Not limited	
200: Riswold-----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.78
Cranberry-----	45	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.84
201: Riswold-----	45	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.78
Grangemont-----	40	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
202: Rock outcrop-----	35	Not rated		Not rated	
Whiskeycreek-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Seepage Thin layer	1.00 1.00
Texascreek, dry-----	25	Very limited Slope Seepage Depth to bedrock	1.00 1.00 0.06	Somewhat limited Thin layer	0.77

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
203: Scaler-----	85	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
204: Scaler-----	60	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grandad-----	20	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
205: Scaler-----	60	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
Grangemont-----	30	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.80
206: Scand-----	65	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
Scaler-----	15	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
207: Seddow-----	75	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.29	Somewhat limited Piping Thin layer	0.82 0.29
208: Seddow-----	85	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.29	Somewhat limited Piping Thin layer	0.82 0.29
209: Seddow-----	80	Very limited Slope Seepage Depth to bedrock	1.00 0.53 0.29	Somewhat limited Piping Thin layer	0.82 0.29
210: Setters-----	80	Somewhat limited Seepage Slope	0.70 0.68	Very limited Depth to saturated zone	1.00
211: Shattuck-----	90	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.36



# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
212: Shattuck-----	90	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.36
213: Shattuck, moist----	90	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.36
214: Shattuck, moist----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.36
Dworshak, moist----	40	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
215: Shattuck-----	60	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.36
Dworshak-----	35	Very limited Slope Seepage	1.00 0.53	Somewhat limited Piping	0.72
216: Sly-----	80	Very limited Slope Seepage	1.00 0.57	Somewhat limited Piping	0.65
Wilkins-----	15	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00
217: Southwick-----	85	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.34
218: Southwick-----	45	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.04
Larkin-----	40	Very limited Slope Seepage	1.00 0.04	Somewhat limited Piping	0.62
219: Statemeadow-----	65	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.63

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
219: Reggear-----	25	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.86
220: Swayne-----	85	Very limited Slope Seepage	1.00 0.70	Not limited	
221: Taney-----	80	Somewhat limited Slope Seepage	0.92 0.70	Very limited Depth to saturated zone Piping	1.00 1.00
222: Taney-----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Depth to saturated zone	0.95
Joel-----	35	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.08
223: Taney-----	65	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 1.00
McCrosket-----	25	Very limited Slope Seepage	1.00 0.70	Somewhat limited Large stones Seepage Thin layer	0.84 0.51 0.16
224: Taney-----	55	Somewhat limited Seepage Slope	0.70 0.68	Very limited Depth to saturated zone Piping	1.00 1.00
Setters-----	35	Somewhat limited Seepage Slope	0.70 0.68	Very limited Depth to saturated zone	1.00
225: Taney-----	40	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 1.00
Setters-----	40	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone	1.00

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
226: Teakean-----	80	Very limited Slope Seepage	1.00 0.03	Very limited Depth to saturated zone	1.00
227: Teneb-----	85	Somewhat limited Seepage	0.53	Very limited Depth to saturated zone Piping	1.00 0.36
228: Texascreek-----	55	Very limited Slope Seepage Depth to bedrock	1.00 1.00 0.06	Somewhat limited Thin layer	0.77
Rock outcrop-----	25	Not rated		Not rated	
229: Texascreek, dry-----	45	Very limited Slope Seepage Depth to bedrock	1.00 1.00 0.06	Somewhat limited Thin layer	0.77
Whiskeycreek-----	35	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Seepage Thin layer	1.00 1.00
230: Norwidge-----	45	Very limited Slope Seepage	1.00 0.43	Somewhat limited Piping	0.17
Threebear-----	45	Very limited Slope Seepage	1.00 0.70	Very limited Depth to saturated zone Piping	1.00 0.94
231: Tomodo-----	80	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.94
232: Tomodo-----	60	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.94
Lado-----	15	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
233: Township-----	55	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones	0.28

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
233: Rettig-----	25	Very limited Seepage Slope	1.00 1.00	Not limited	
234: Township-----	65	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones	0.28
Rettig-----	25	Very limited Seepage Slope	1.00 1.00	Not limited	
235: Township, dry-----	45	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones	0.28
Rettig, low precipitation-----	25	Very limited Seepage Slope	1.00 1.00	Not limited	
Nakarna, dry-----	20	Very limited Seepage Slope	1.00 1.00	Very limited Piping Thin layer	1.00 0.37
236: Trappercreek-----	50	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.65
Narnett-----	35	Very limited Slope Seepage	1.00 0.70	Somewhat limited Piping	0.97
237: Uvi-----	65	Very limited Seepage Slope	1.00 1.00	Very limited Piping	1.00
238: Uvi-----	90	Very limited Slope Seepage	1.00 1.00	Very limited Piping	1.00
239: Vaywood, high precipitation-----	60	Very limited Seepage Slope	1.00 1.00	Not limited	
Vaywood, dry-----	30	Very limited Seepage Slope	1.00 1.00	Not limited	

# Soil Survey of Clearwater Area, Idaho

Table 25.—Ponds and Embankments—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes and levees	
		Rating class and limiting features	Value	Rating class and limiting features	Value
240: Vaywood-----	85	Very limited Seepage Slope	1.00 1.00	Not limited	
241: Vaywood-----	65	Very limited Seepage Slope	1.00 1.00	Not limited	
Handoff-----	20	Very limited Seepage Slope	1.00 1.00	Not limited	
242: Water-----	100	Not rated		Not rated	
243: Wellsbench-----	80	Somewhat limited Slope Depth to bedrock	0.68 0.42	Somewhat limited Large stones Thin layer	0.11 0.42
244: Wellsbench-----	50	Very limited Slope Depth to bedrock	1.00 0.42	Somewhat limited Large stones Thin layer	0.11 0.42
Lacy-----	30	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Thin layer Large stones	1.00 0.82
245: Wilkins-----	85	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00

Table 26.-Engineering Properties

(Absence of an entry indicates that the data were not estimated. The asterisk (\*) denotes the representative textures follow.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
1: Agatha, very rocky-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Highly decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam gravelly ashy silt loam	*CL, GC-GM, CL-ML			0	0-18	153-96	51-96
	5-9	*Gravelly ashy silt loam, ashy silt loam, very cobbly ashy silt loam	*CL, GC			0	0-39	43-75	41-74
	9-20	*Very gravelly silt loam, very cobbly silt loam, very gravelly loam, extremely gravelly silt loam	*GC, CL, GC-GM			0	17-38	138-71	35-70
Rock outcrop----	20-60	*Extremely cobbly silty clay loam, extremely cobbly silt loam, very gravelly clay loam	*GC, CH			0-24	30-59	127-62	24-61
	60-70	*Unweathered bedrock				---	---	---	---
	0-60	*Unweathered bedrock				---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
2: Agatha-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Highly decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam				0	0-18	53-96	51-96
	5-9	gravelly ashy silt loam	CL-ML	A-6					
		*Gravelly ashy silt	*CL, GC	*A-6, A-2	0	0-39	43-75	41-74	38-72
		loam, ashy silt loam, very cobbly ashy silt loam							
	9-20	*Very gravelly silt loam, very cobbly silt loam, very gravelly loam, extremely gravelly silt loam	*GC, CL, GC-GM	*A-6, A-4, A-2	0	17-38	38-71	35-70	31-70
	20-60	*Extremely cobbly silty clay loam, extremely cobbly silt loam, very gravelly clay loam	*GC, CH	*A-6, A-7, A-2	0-24	30-59	27-62	24-61	21-61
	60-70	*Unweathered bedrock			---	---	---	---	---
3: Agatha-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Highly decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam				0	0-18	53-96	51-96
	5-9	gravelly ashy silt loam	CL-ML	A-6					
		*Gravelly ashy silt	*CL, GC	*A-6, A-2	0	0-39	43-75	41-74	38-72
		loam, ashy silt loam, very cobbly ashy silt loam							
	9-20	*Very gravelly silt loam, very cobbly silt loam, very gravelly loam, extremely gravelly silt loam	*GC, CL, GC-GM	*A-6, A-4, A-2	0	17-38	38-71	35-70	31-70
	20-60	*Extremely cobbly silty clay loam, extremely cobbly silt loam, very gravelly clay loam	*GC, CH	*A-6, A-7, A-2	0-24	30-59	27-62	24-61	21-61
	60-70	*Unweathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
4: Ahsahka-----	In					Pct			
	0-6	*Silt loam	*ML, CL-ML, CL	*A-4, A-6	0	0-1	91-100	91-100	83-98
	6-16	*Silt loam, loam, silty clay loam	*CL, CL-ML	*A-6, A-4	0	0-1	91-100	91-100	81-10
	16-35	*Loam, silt loam, silty clay loam, gravelly clay loam	*CL, SC	*A-6, A-7, A-4	0-1	0-9	73-94	72-94	60-94
	35-60	*Clay, silty clay loam, gravelly silty clay loam	*CH, CL	*A-7, A-6	0-1	0-9	82-100	82-100	67-10
Fordcreek-----	0-6	*Loam	*CL, SC-SM, CL-ML	*A-4, A-6	0-1	0-8	76-100	75-100	64-95
	6-16	*Loam, clay loam, gravelly sandy loam, sandy clay loam	*CL, GC-GM, CL-ML	*A-6, A-4	0-1	0-9	66-100	65-100	53-96
	16-27	*Clay loam, gravelly clay loam, sandy loam	*CL, GC-GM, CL-ML	*A-6, A-2, A-4, A-7	0-1	0-8	67-100	66-100	50-97
	27-41	*Clay loam, sandy loam, very cobbly clay loam	*CL, GC-GM, CL-ML, SC-SM, SC	*A-6, A-2, A-7, A-4	0-1	0-24	64-100	63-100	44-96
	41-51	*Weathered bedrock			---	---	---	---	---
5: Ahsahka-----	0-6	*Silt loam	*ML, CL-ML, CL	*A-4, A-6	0	0-1	91-100	91-100	83-98
	6-16	*Silt loam, loam, silty clay loam	*CL, CL-ML	*A-6, A-4	0	0-1	91-100	91-100	81-10
	16-35	*Loam, silt loam, silty clay loam, gravelly clay loam	*CL, SC	*A-6, A-7, A-4	0-1	0-9	73-94	72-94	60-94
	35-60	*Clay, silty clay loam, gravelly silty clay loam	*CH, CL	*A-7, A-6	0-1	0-9	82-100	82-100	67-10



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
5: Whiskeycreek-----	In				Pct	Pct			
	0-4	*Coarse sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4	0	0	95-100	85-100	50-65
	4-9	*Coarse sandy loam, gravelly loamy coarse sand, sandy loam	*SM, SC-SM	*A-1, A-2	0	0-15	85-100	70-90	40-55
	9-15	*Gravelly loamy coarse sand, loamy coarse sand, gravelly loamy sand	*SM, SW-SM	*A-1	0	0-35	80-95	65-85	30-50
	15-25	*Unweathered bedrock			---	---	---	---	---
6: Aldermand-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-7	*Ashy loam	*ML, SM	*A-4, A-5	0	0	90-100	85-100	65-90
	7-17	*Ashy loam, ashy silt loam, ashy coarse sandy loam	*ML, SM	*A-4, A-2	0	0-5	95-100	85-100	65-90
	17-25	*Sandy loam, loam, gravelly loamy sand	*SC-SM, SM, CL-ML, CL	*A-4, A-2	0	0-24	69-92	67-91	49-77
	25-33	*Sandy loam, gravelly loamy coarse sand, loam	*SC-SM, SM, CL	*A-2, A-4	0	0-10	75-100	65-95	45-75
	33-44	*Gravelly sandy loam, coarse sand	*SM, SC-SM, GM	*A-1, A-2	0	0-1	59-92	57-92	38-72
	44-62	*Very stony loamy sand, very gravelly loamy coarse sand	*SM, SC-SM, SP-SM, GP-GM	*A-1, A-2	30-48	8-30	39-71	36-69	27-55

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	Pct	4		
							10	40	
7: Aldermand-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, SM			0	0	90-100	85-100
	7-17	*Ashy loam, ashy silt loam, ashy coarse sandy loam	*ML, SM			0	0-5	95-100	85-100
	17-25	*Sandy loam, loam, gravelly loamy sand	*SC-SM, SM, CL-ML, CL			0	0-24	69-92	67-91
	25-33	*Sandy loam, gravelly loamy coarse sand, loam	*SC-SM, SM, CL			0	0-10	75-100	65-95
	33-44	*Gravelly sandy loam, coarse sand	*SM, SC-SM, GM			0	0-1	59-92	57-92
	44-62	*Very stony loamy sand, very gravelly loamy coarse sand	*SM, SC-SM, SP-SM, GP-GM			30-48	8-30	39-71	36-69
8: Aldermand, dry--	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, SM			0	0	90-100	85-100
	7-17	*Ashy loam, ashy silt loam, ashy coarse sandy loam	*ML, SM			0	0-5	95-100	85-100
	17-25	*Sandy loam, loam, gravelly loamy sand	*SC-SM, SM, CL-ML, CL			0	0-24	69-92	67-91
	25-33	*Sandy loam, gravelly loamy coarse sand, loam	*SC-SM, SM, CL			0	0-10	75-100	65-95
	33-44	*Gravelly sandy loam, coarse sand	*SM, SC-SM, GM			0	0-1	59-92	57-92
	44-62	*Very stony loamy sand, very gravelly loamy coarse sand	*SM, SC-SM, SP-SM, GP-GM			30-48	8-30	39-71	36-69

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number-			
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	
9: Aquandic Cryaquepts-----	In				Pct	Pct				
	0-8	*Ashy fine sandy loam	*SC-SM, SM	*A-4	0	0	100	100	89-97	
	8-18	*Loam, silt loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	82-92	
	18-27	*Loam, fine sandy loam, loamy sand, gravelly loam	*CL-ML, SM, CL	*A-4, A-2	0	0	95-100	79-100	63-92	
10: Aquandic Endoaquepts-----	27-54	*Sandy loam, fine sandy loam, gravelly loamy coarse sand	*SC-SM, SC, SM	*A-2, A-4, A-1	0	0	78-95	56-95	39-79	
	54-60	*Stratified very cobbly sand to very gravelly loam	*SM, SC-SM, GW-GM, GM, GP-GM	*A-2, A-1	0-1	23-53	35-70	31-65	23-59	
Aquandic Dystrudepts-----	0-10	*Ashy silt loam	*CL-ML, CL, ML	*A-4	0	0	100	100	91-10	
	10-52	*Loam, silt loam, coarse sandy loam	*CL, SM	*A-4, A-6	0	0	96-100	96-100	77-96	
	52-60	*Sandy loam, silt loam, extremely gravelly coarse sand	*SC-SM, GP-GM, SC, GP-GC, SM, GM	*A-4, A-2, A-1	0	0-37	23-100	20-100	13-86	
Aquandic Dystrudepts-----	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10	
	2-10	*Gravelly ashly loam	*GC, GC-GM	*A-4, A-2	0	0	51-75	49-74	40-69	
	10-31	*Extremely gravelly sandy loam, very gravelly sandy loam, silt loam	*GW-GC, GP-GM, CL	*A-2, A-6, A-4, A-1	0	0-32	27-100	24-100	16-90	
	31-70	*Extremely gravelly sandy loam, extremely cobbly sand, extremely cobbly silt loam, silt loam	*GP, SC, GW	*A-1, A-4, A-2	0	0-80	10-100	6-100	4-85	

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-			
			Unified	AASHTO	inches	3-10 inches				
							4	10	40	
11: Bandmill, dry----	In				Pct	Pct				
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100	60-10
	2-3	*Ashy silt loam	*ML			0	0-5	95-100	95-100	85-95
	3-10	*Ashy silt loam	*ML			0	0-5	95-100	95-100	85-95
	10-21	*Silt loam, silty clay loam	*CL			0	0-5	95-100	95-100	85-95
	21-27	*Silt loam, silty clay loam	*CL			0	0-5	95-100	95-100	85-95
	27-62	*Silty clay loam, silt loam, clay loam	*CL, CH			0	0-5	90-100	90-100	75-90
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100	60-10
	2-3	*Moderately decomposed plant material	*PT			0	0	100	100	60-10
	3-7	*Ashy silt loam	*ML, OH			0	0	100	100	90-10
Bargamin-----	7-14	*Ashy silt loam, ashy loam	*ML			0	0	100	100	90-10
	14-38	*Silt loam, silty clay loam	*CL, CL-ML			0	0	100	95-100	90-10
	38-95	*Silty clay loam, silt loam	*CL			0	0	85-100	84-100	71-10
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100	60-10
	1-2	*Ashy silt loam	*ML, MH			0	0	100	100	99-10
	2-17	*Ashy silt loam	*ML, MH			0	0	100	100	99-10
	17-38	*Silt loam, silty clay loam	*CL			0	0	100	100	96-10
	38-65	*Silty clay loam, silty clay	*CL, CH			0	0	100	100	92-10
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100	60-10
	2-3	*Ashy silt loam	*ML			0	0-5	95-100	95-100	85-95
12: Bandmill-----	3-10	*Ashy silt loam	*ML			0	0-5	95-100	95-100	85-95
	10-21	*Silt loam, silty clay loam	*CL			0	0-5	95-100	95-100	85-95
	21-27	*Silt loam, silty clay loam	*CL			0	0-5	95-100	95-100	85-95
	27-62	*Silty clay loam, silt loam, clay loam	*CL, CH			0	0-5	90-100	90-100	75-90
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100	60-10
	2-3	*Ashy silt loam	*ML			0	0-5	95-100	95-100	85-95
	3-10	*Ashy silt loam	*ML			0	0-5	95-100	95-100	85-95
	10-21	*Silt loam, silty clay loam	*CL			0	0-5	95-100	95-100	85-95
	21-27	*Silt loam, silty clay loam	*CL			0	0-5	95-100	95-100	85-95
	27-62	*Silty clay loam, silt loam, clay loam	*CL, CH			0	0-5	90-100	90-100	75-90

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	3-10 inches	4	10	40
12: Riswold-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Ashy silt loam	*ML			0	0	95-100	90-100
	9-17	*Ashy silt loam, ashy loam	*ML			0	0	90-100	85-100
	17-27	*Silt loam, gravelly	*CL			0	0	80-100	75-100
	27-44	*Silt loam silt loam, silty clay loam	*CL			0	0-8	75-100	70-100
	44-60	*Cobbly silty clay loam	*CL, GC			0	3-21	54-87	54-87
	60-72	*Very cobbly silty clay loam	*CL, GC			0	5-51	37-68	34-67
13: Berthahill, moist-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-4	*Moderately decomposed plant material	*PT			0	0	100	100
	4-11	*Medial loam	*ML, MH			0	0	90-100	85-100
	11-20	*Medial loam, medial silt loam	*ML			0	0	90-100	85-100
	20-28	*Gravelly sandy loam, gravelly loam, very gravelly sandy loam	*GC, GC-GM, CL			0-15	0-25	45-80	40-75
	28-40	*Very gravelly loam, extremely gravelly coarse sandy loam, very gravelly sandy clay loam	*GC, GC-GM			0-15	0-25	30-60	25-55
	40-55	*Extremely cobbly sandy loam, very gravelly coarse sandy loam, extremely gravelly sandy clay loam	*GC, GP-GC, GC-GM			0-20	0-50	15-50	10-40
	55-66	*Extremely cobbly sandy loam, very gravelly sandy clay loam, extremely gravelly loamy coarse sand	*GC, GP-GC, GC-GM			0-20	0-65	15-45	10-40

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
13: Handoff-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-11	*Medial loam	*OL, OH, ML	*A-5, A-4	0	0	90-100	85-95	75-85
	11-22	*Medial loam, medial silt loam	*ML, OH	*A-5, A-4	0	0	85-95	80-95	65-85
	22-30	*Gravelly medial loam, medial loam, very cobbly medial loam	*ML, MH, GM	*A-4, A-5	0	0-45	60-95	55-90	50-80
	30-45	*Very gravelly loam, very gravelly sandy loam, extremely cobbly fine sandy loam	*GC, GW-GC, SC-SM, SC	*A-2, A-4	0-10	0-70	35-75	30-60	15-55
	45-54	*Extremely gravelly sandy loam, very gravelly sandy loam, extremely cobbly sandy loam	*GC-GM, GP-GM, SC-SM	*A-1	0-15	15-70	35-60	25-50	15-30
	54-64	*Extremely cobbly loamy coarse sand, extremely gravelly loam	*GW-GM, GC-GM, GM	*A-1	10-15	30-75	30-60	25-50	10-35

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
14: Berthahill-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-4	*Moderately decomposed plant material	*PT			0	0	100	100
	4-11	*Medial loam	*ML, MH	*A-5, A-4	0	0	0	90-100	85-100
	11-20	*Medial loam, medial silt loam	*ML	*A-5, A-4	0	0	0	90-100	85-100
	20-28	*Gravelly sandy loam, gravelly loam, very gravelly sandy loam	*GC, GC-GM, CL	*A-4, A-2, A-1	0-15	0-25	45-80	40-75	35-65
	28-40	*Very gravelly loam, extremely gravelly coarse sandy loam, very gravelly sandy clay loam	*GC, GC-GM	*A-2, A-1, A-6, A-4	0-15	0-25	30-60	25-55	25-50
	40-55	*Extremely cobbly sandy loam, very gravelly coarse sandy loam, extremely gravelly sandy clay loam	*GC, GP-GC, GC-GM	*A-2, A-1	0-20	0-50	15-50	10-40	10-35
	55-66	*Extremely cobbly sandy loam, very gravelly sandy clay loam, extremely gravelly loamy coarse sand	*GC, GP-GC, GC-GM	*A-2, A-1	0-20	0-65	15-45	10-40	10-35

Table 26.-Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
14: Handoff-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-11	*Medial loam	*OL, OH, ML	*A-5, A-4	0	0	90-100	85-95	75-85
	11-22	*Medial loam, medial silt loam	*ML, OH	*A-5, A-4	0	0	85-95	80-95	65-85
	22-30	*Gravelly medial loam, medial loam, very cobbly medial loam	*ML, MH, GM	*A-4, A-5	0	0-45	60-95	55-90	50-80
	30-45	*Very gravelly loam, very gravelly sandy loam, extremely cobbly fine sandy loam	*GC, GW-GC, SC-SM, SC	*A-2, A-4	0-10	0-70	35-75	30-60	15-55
	45-54	*Extremely gravelly sandy loam, very gravelly sandy loam, extremely cobbly sandy loam	*GC-GM, GP-GM, SC-SM	*A-1	0-15	15-70	35-60	25-50	15-30
	54-64	*Extremely cobbly loamy coarse sand, extremely gravelly loam	*GW-GM, GC-GM, GM	*A-1	10-15	30-75	30-60	25-50	10-35



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
15: Berthahill-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-4	*Moderately decomposed plant material	*PT			0	0	100	100
	4-11	*Medial loam	*ML, MH			0	0	90-100	85-100
	11-20	*Medial loam, medial silt loam	*ML			0	0	90-100	85-100
	20-28	*Gravelly sandy loam, gravelly loam, very gravelly sandy loam	*GC, GC-GM, CL			0-15	0-25	45-80	40-75
	28-40	*Very gravelly loam, extremely gravelly coarse sandy loam, very gravelly sandy clay loam	*GC, GC-GM			0-15	0-25	30-60	25-55
	40-55	*Extremely cobbly sandy loam, very gravelly coarse sandy loam, extremely gravelly sandy clay loam	*GC, GP-GC, GC-GM			0-20	0-50	15-50	10-40
	55-66	*Extremely cobbly sandy loam, very gravelly sandy clay loam, extremely gravelly loamy coarse sand	*GC, GP-GC, GC-GM			0-20	0-65	15-45	10-40
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
Shattuck-----	2-7	*Ashy silt loam	*ML, MH			0	0	90-100	85-100
	7-19	*Ashy silt loam, ashy loam, gravelly ashy loam	*ML			0	0	80-100	75-100
	19-30	*Gravelly clay loam	*CL, GC			0	0	54-73	52-72
	30-63	*Extremely cobbly clay loam	*GC			0-21	37-55	28-68	25-66

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
16: Bigtalk, cool----	In				Pct	Pct			
	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-3	*Loam	*CL, CL-ML	*A-4, A-6	0	0	100	90-100	60-95
	3-8	*Loam, silt loam	*CL	*A-4, A-6	0	0	95-100	90-100	60-95
	8-35	*Loam, cobbly loam	*CL, SC	*A-4, A-6	0	0-25	80-100	70-95	60-90
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL	*A-4, A-6	0	0-15	75-95	65-90	55-80
Bigtalk, wet----	48-61	*Fine sandy loam, loam, gravelly loam	*CL-ML, GM, SM, CL	*A-4, A-6	0	0-10	70-95	65-90	60-85
	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-3	*Loam	*CL, CL-ML	*A-4, A-6	0	0	100	90-100	60-95
	3-8	*Loam, silt loam	*CL	*A-4, A-6	0	0	95-100	90-100	60-95
	8-35	*Loam, cobbly loam	*CL, SC	*A-4, A-6	0	0-25	80-100	70-95	60-90
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL	*A-4, A-6	0	0-15	75-95	65-90	55-80
17: Bigtalk-----	48-61	*Fine sandy loam, loam, gravelly loam	*CL-ML, GM, SM, CL	*A-4, A-6	0	0-10	70-95	65-90	60-85
	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-3	*Loam	*CL, CL-ML	*A-4, A-6	0	0	100	90-100	60-95
	3-8	*Loam, silt loam	*CL	*A-4, A-6	0	0	95-100	90-100	60-95
	8-35	*Loam, cobbly loam	*CL, SC	*A-4, A-6	0	0-25	80-100	70-95	60-90
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL	*A-4, A-6	0	0-15	75-95	65-90	55-80
18: Bigtalk, cool----	48-61	*Fine sandy loam, loam, gravelly loam	*CL-ML, GM, SM, CL	*A-4, A-6	0	0-10	70-95	65-90	60-85
	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-3	*Loam	*CL, CL-ML	*A-4, A-6	0	0	100	90-100	60-95
	3-8	*Loam, silt loam	*CL	*A-4, A-6	0	0	95-100	90-100	60-95
	8-35	*Loam, cobbly loam	*CL, SC	*A-4, A-6	0	0-25	80-100	70-95	60-90
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL	*A-4, A-6	0	0-15	75-95	65-90	55-80
Bigtalk, wet----	48-61	*Fine sandy loam, loam, gravelly loam	*CL-ML, GM, SM, CL	*A-4, A-6	0	0-10	70-95	65-90	60-85
	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-3	*Loam	*CL, CL-ML	*A-4, A-6	0	0	100	90-100	60-95
	3-8	*Loam, silt loam	*CL	*A-4, A-6	0	0	95-100	90-100	60-95
	8-35	*Loam, cobbly loam	*CL, SC	*A-4, A-6	0	0-25	80-100	70-95	60-90
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL	*A-4, A-6	0	0-15	75-95	65-90	55-80

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	3-10 inches	4	10	40
18: Floodwood, cool	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy loam	*ML, OL			0	0	85-100	75-100
	3-13	*Ashy loam, ashy silt loam	*ML			0	0	85-100	75-100
	13-35	*Loam, gravelly loam, cobbly silt loam	*CL, SC-SM, CL-ML			0	0-10	80-100	70-100
	35-55	*Fine sandy loam, very fine sandy loam, sandy loam, loam	*SC, CL, SC-SM			0	0-20	75-100	65-95
	55-63	*Fine sandy loam, loam, loamy sand	*SC-SM, SC, SM			0	0-15	80-100	75-95
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-3	*Loam	*CL, CL-ML			0	0	100	90-100
	3-8	*Loam, silt loam	*CL			0	0	95-100	90-100
19: Bigtalk, cool----	8-35	*Loam, cobbly loam	*CL, SC			0	0-25	80-100	70-95
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL			0	0-15	75-95	65-90
	48-61	*Fine sandy loam, loam, gravelly loam	*CL-ML, GM, SM, CL			0	0-10	70-95	65-90
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-5	*Ashy loam	*ML			0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL			0	0	100	95-100
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM			0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam,	*SC, SC-SM, GC, CL			0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM			0	2-7	60-80	55-80
Keeler, cool----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-5	*Ashy loam	*ML			0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL			0	0	100	95-100
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM			0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam,	*SC, SC-SM, GC, CL			0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM			0	2-7	60-80	55-80

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
20: Bouldercreek, moist-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-8	*Ashy loam	*ML, MH, GM	*A-5, A-4	0	0	64-100	63-100	60-10
	8-21	*Ashy loam, ashly silt loam, gravelly ashly sandy loam	*ML, MH, GM	*A-5, A-4	0	0	57-100	56-100	53-10
	21-27	*Gravelly loam, very cobbly coarse sandy loam, very gravelly fine sandy loam	*CL-ML, GM, CL	*A-4, A-1, A-2	0-32	0-50	35-69	32-68	30-68
	27-34	*Very gravelly sandy loam, very gravelly loam, extremely cobbly sandy loam	*GC-GM, GP-GM, GC GW-GM, GC	*A-1, A-4, A-2	0-32	0-45	22-76	20-75	14-65
	34-53	*Very cobbly coarse sandy loam, extremely stony loam, very gravelly fine sandy loam	*GC-GM, SC, GP-GM, GW-GM	*A-1, A-4, A-2	0-32	17-65	24-100	21-100	12-69
	53-69	*Very gravelly loamy sand, extremely stony sandy loam, very cobbly loamy sand	*GP-GM, SC, GP, GC-GM	*A-1, A-2	0-72	23-63	25-66	22-65	16-56
21: Bouldercreek----	0-2	*Ashy silt loam	*ML, OH	*A-4, A-5	0	0	75-100	70-100	65-95
	2-15	*Silt loam, gravelly silt loam	*ML, GM	*A-4, A-5	0	0-28	46-87	46-87	45-87
	15-26	*Very gravelly sandy loam, very gravelly loam, very cobbly loam	*GM, GC-GM	*A-2, A-4, A-1	0-10	10-40	40-55	35-50	20-45
	26-60	*Extremely gravelly sandy loam, extremely cobbly sandy loam, extremely stony sandy loam	*GM, GP-GM	*A-1	0-30	10-30	25-55	20-50	10-35

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-					
			Unified	AASHTO	inches	inches	4			10	40	
22: Boulder creek	In					Pct	Pct					
	0-2	*Ashy silt loam	*ML, OH	*A-4, A-5	0	0	75-100	70-100	65-95			
	2-15	*Silt loam, gravelly silt loam	*ML, GM	*A-4, A-5	0	0-28	46-87	46-87	45-87			
	15-26	*Very gravelly sandy loam, very gravelly loam, very cobbly loam	*GM, GC-GM	*A-2, A-4, A-1	0-10	10-40	40-55	35-50	20-45			
	26-60	*Extremely gravelly sandy loam, extremely cobbly sandy loam, extremely stony sandy loam	*GM, GP-GM	*A-1	0-30	10-30	25-55	20-50	10-35			
23: Boulder creek, moist	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10			
	1-8	*Ashy loam	*ML, MH, GM	*A-5, A-4	0	0	64-100	63-100	60-10			
	8-21	*Ashy loam, ashly silt loam, gravelly ashly sandy loam	*ML, MH, GM	*A-5, A-4	0	0	57-100	56-100	53-10			
	21-27	*Gravelly loam, very cobbly coarse sandy loam, very gravelly fine sandy loam	*CL-ML, GM, CL	*A-4, A-1, A-2	0-32	0-50	35-69	32-68	30-68			
	27-34	*Very gravelly sandy loam, very gravelly loam, extremely cobbly sandy loam	*GC-GM, GP-GM, GW-GM, GC	*A-1, A-4, A-2	0-32	0-45	22-76	20-75	14-65			
	34-53	*Very cobbly coarse sandy loam, extremely stony loam, very gravelly fine sandy loam	*GC-GM, SC, GP-GM, GW-GM	*A-1, A-4, A-2	0-32	17-65	24-100	21-100	12-69			
	53-69	*Very gravelly loamy sand, extremely stony sandy loam, very cobbly loamy sand	*GP-GM, SC, GP, GC-GM	*A-1, A-2	0-72	23-63	25-66	22-65	16-56			

Table 26.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number--		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
23: Brodere-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT				0	0	100
	1-2	*Moderately decomposed plant material	*PT				0	0	100
	2-4	*Ashy silt loam	*ML, MH				0	0	100
	4-21	*Ashy silt loam, ashy loam	*ML				0-1	0-13	87-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML				0-1	0-9	68-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML				0	0	52-100
24: Bouldercreek----	0-1	*Slightly decomposed plant material	*PT				0	0	100
	1-8	*Ashy loam	*ML, MH, GM				0	0	64-100
	8-21	*Ashy loam, ashy silt loam, gravelly ashy sandy loam	*ML, MH, GM				0	0	57-100
	21-27	*Gravelly loam, very coarsely coarse sandy loam, very gravelly fine sandy loam	*CL-ML, GM, CL				0-32	0-50	35-69
	27-34	*Very gravelly sandy loam, very gravelly loam, extremely cobbly sandy loam	*GC-GM, GP-GM, GW-GM, GC				0-32	0-45	22-76
	34-53	*Very cobbly coarse sandy loam, extremely stony loam, very gravelly fine sandy loam	*GC-GM, SC, GP-GM, GW-GM				0-32	17-65	24-100
	53-69	*Very gravelly loamy sand, extremely stony sandy loam, very cobbly loamy sand	*GP-GM, SC, GP, GC-GM				0-72	23-63	25-66
									22-65
									16-56

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
24: Broderecreek-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT						
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy silt loam							
	4-21	*Ashy silt loam, ashy loam	*ML, MH *ML			0	0	100	100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML			0-1	0-13	87-100	100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML			0	0	52-100	50-100
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-8	*Ashy loam	*ML, MH, GM			0	0	64-100	163-100
	8-21	*Ashy loam, ashy silt loam, gravelly ashy sandy loam	*ML, MH, GM			0	0	57-100	156-100
25: Bouldercreek-----	21-27	*Gravelly loam, very cobbly coarse sandy loam, very gravelly fine sandy loam	*CL-ML, GM, CL			0-32	0-50	35-69	32-68
	27-34	*Very gravelly sandy loam, very gravelly loam, extremely cobbly sandy loam	*GC-GM, GP-GM, GW-GM, GC			0-32	0-45	22-76	20-75
	34-53	*Very cobbly coarse sandy loam, extremely stony loam, very gravelly fine sandy loam	*GC-GM, SC, GP-GM, GW-GM			0-32	17-65	24-100	21-100
	53-69	*Very gravelly loamy sand, extremely stony sandy loam, very cobbly loamy sand	*GP-GM, SC, GP, GC-GM			0-72	23-63	25-66	22-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
25: Judgetown-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy loam							
	4-17	*Ashy loam, ashy silt loam, gravelly ashy loam	*ML, GM, MH *ML, MH, GM	*A-5, A-4 *A-5, A-4	0 0	0 0	66-100 67-100	65-100 66-100	64-100 66-100
	17-30	*Sandy loam, loam, gravelly loamy sand	*SC, SM	*A-4, A-6, A-1	0-1	0-16	67-100	66-100	46-86
	30-52	*Loamy coarse sand, gravelly coarse sandy loam, extremely gravelly loamy coarse sand, loamy sand	*SM, SP-SM, SC-SM	*A-1, A-2	0-16	0-23	60-92	58-92	29-55
	52-62	*Weathered bedrock			---	---	---	---	---
26: Bouldercreek, high precipitation--	0-2	*Ashy silt loam	*ML, OH	*A-4, A-5	0	0	75-100	70-100	65-95
	2-15	*Silt loam, gravelly silt loam	*ML, GM	*A-4, A-5	0	0-28	46-87	46-87	45-87
	15-26	*Very gravelly sandy loam, very gravelly loam, very cobbly loam	*GM, GC-GM	*A-2, A-4, A-1	0-10	10-40	40-55	35-50	20-45
	26-60	*Extremely gravelly sandy loam, extremely cobbly sandy loam, extremely stony sandy loam	*GM, GP-GM	*A-1	0-30	10-30	25-55	20-50	10-35



Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-		
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-		
							4	10	40
26:	<i>In</i>				<i>Pct</i>	<i>Pct</i>			
Marblecreek-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-5	*Gravelly ashly silt loam	*GM	*A-4, A-2, A-5	0	0-15	50-65	45-60	40-55
	5-13	*Gravelly ashly silt loam, gravelly loam	*GM	*A-4, A-5, A-2	0	0-25	45-65	40-60	35-55
	13-27	*Very gravelly sandy loam, very cobbly loam, very gravelly fine sandy loam	*GM, GC-GM	*A-2, A-4, A-1	0	10-40	40-60	35-55	25-50
	27-46	*Extremely gravelly sandy loam, extremely cobbly fine sandy loam	*GM, GW-GM, GC-GM	*A-1, A-2	0	25-55	35-55	30-50	15-45
	46-62	*Extremely cobbly loamy sand, extremely gravelly sandy loam, extremely flaggy sandy loam	*GM, GW-GM	*A-1	0	30-60	35-55	30-50	15-35

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
27: Bouldercreek, cool, dry-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-8	*Ashy loam	*ML, MH, GM	*A-5, A-4	0	0	64-100	63-100	60-100
	8-21	*Ashy loam, ashly silt loam, gravelly ashly sandy loam	*ML, MH, GM	*A-5, A-4	0	0	57-100	56-100	53-100
	21-27	*Gravelly loam, very cobbly coarse sandy loam, very gravelly fine sandy loam	*CL-ML, GM, CL	*A-4, A-1, A-2	0-32	0-50	35-69	32-68	30-68
	27-34	*Very gravelly sandy loam, very gravelly loam, extremely cobbly sandy loam	*GC-GM, GP-GM, GC	*A-1, A-4, A-2	0-32	0-45	22-76	20-75	14-65
	34-53	*Very cobbly coarse sandy loam, extremely stony loam, very gravelly fine sandy loam	*GC-GM, SC, GP-GM, GW-GM	*A-1, A-4, A-2	0-32	17-65	24-100	21-100	12-69
	53-69	*Very gravelly loamy sand, extremely stony sandy loam, very cobbly loamy sand	*GP-GM, SC, GP, GC-GM	*A-1, A-2	0-72	23-63	25-66	22-65	16-56

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
27: Rettig, cool----	In					Pct			
	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-7	*Ashy loam	*ML	*A-5, A-4	0	0	92-100	70-100	66-10
	7-27	*Ashy loam, ashy silt loam	*ML	*A-5, A-4	0	0	86-100	65-100	62-10
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM	*A-2, A-4	0	0	80-100	60-100	45-87
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam	*SC-SM, SM, CL	*A-4, A-1, A-2	0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC	*A-2, A-4, A-1	0-8	0-70	65-91	40-91	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC	*A-1, A-4, A-2	0	9-32	60-90	35-81	25-65
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-3	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
28: Brequito, dry----	3-5	*Ashy silt loam	*ML	*A-5, A-4	0	0	74-100	73-100	72-10
	5-11	*Ashy silt loam, ashy loam	*ML	*A-4, A-5	0	0-1	88-100	88-100	86-10
	11-20	*Silt loam, loam, sandy clay loam	*CL	*A-4, A-6	0	0	92-100	91-100	90-10
	20-37	*Silty clay loam, gravelly loam, silt loam	*CL	*A-6, A-4	0	0-8	76-100	75-100	67-10
	37-67	*Loam, sandy clay loam, very gravelly sandy loam, gravelly loamy sand	*CL, GM	*A-4, A-1, A-6	0	0-18	40-100	38-100	29-99

Table 26.-Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number--				
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40		
29: Brequito-----	In				Pct	Pct					
	0-1	*Slightly decomposed plant material	*PT				0	0	100	100	60-100
	1-3	*Moderately decomposed plant material	*PT				0	0	100	100	60-100
	3-5	*Ashy silt loam	*ML				0	0	174-100	73-100	72-100
	5-11	*Ashy silt loam, ash loam	*ML				0	0-1	188-100	88-100	86-100
	11-20	*Silt loam, loam, sandy clay loam	*CL				0	0	192-100	91-100	90-100
	20-37	*Silty clay loam, gravelly loam, silt loam	*CL				0	0-8	176-100	75-100	67-100
	37-67	*Loam, sandy clay loam, very gravelly sandy loam, gravelly loamy sand	*CL, GM				0	0-18	140-100	38-100	29-99
	0-2	*Slightly decomposed plant material	*PT				0	0	100	100	60-100
	2-3	*Moderately decomposed plant material	*PT				0	0	100	100	60-100
Grangemont-----	3-7	*Ashy silt loam	*ML, OH				0	0	100	100	90-100
	7-14	*Ashy silt loam, ash loam	*ML				0	0	100	100	90-100
	14-38	*Silt loam, silty clay loam	*CL, CL-ML				0	0	100	95-100	90-100
	38-95	*Silty clay loam, silt loam	*CL				0	0	185-100	84-100	71-100

Table 26.-Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number--			
			Unified	AASHTO	inches	3-10 inches	4			
							10			
						Pct	Pct			
30: Brequito-----	In									
	0-1	*Slightly decomposed plant material	*PT							
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100	60-100
	3-5	*Ashy silt loam								
	5-11	*Ashy silt loam, ashy loam	*ML *ML			0	0	100	100	60-100
	11-20	*Silt loam, loam, sandy clay loam	*CL			0	0	174-100 73-100 72-100	188-100 88-100 86-100	90-100
	20-37	*Silty clay loam, gravelly loam, silt loam	*CL			0	0-8	176-100 75-100 67-100		
	37-67	*Loam, sandy clay loam, very gravelly sandy loam, gravelly loamy sand	*CL, GM			0	0-18	140-100 38-100 29-99		
	0-1	*Slightly decomposed plant material	*PT							
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100	60-100
Lado, dry-----	2-4	*Medial silt loam	*ML, MH							
	4-20	*Medial silt loam	*ML			0	0	100	95-100 85-95	
	20-48	*Clay loam, silt loam, gravelly loam	*CL			0	0	100	100	85-95
	48-64	*Loam, sandy loam, gravelly clay loam	*CL, SC			0	0	190-100 70-100 65-95		

Table 26.-Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number--			
			Unified	AASHTO	inches	3-10 inches	Pct			
							Pct			
	In									
31: Brequito-----	0-1	*Slightly decomposed plant material	*PT							
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100	60-100
	3-5	*Ashy silt loam	*ML							
	5-11	*Ashy silt loam, ash loam	*ML			0	0-1	188-100	88-100	72-100
	11-20	*Silt loam, loam, sandy clay loam	*CL			0	0	192-100	91-100	90-100
	20-37	*Silty clay loam, gravelly loam, silt loam	*CL			0	0-8	176-100	75-100	67-100
	37-67	*Loam, sandy clay loam, very gravelly sandy loam, gravelly loamy sand	*CL, GM			0	0-18	140-100	38-100	29-99
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100	60-100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100	60-100
	2-4	*Medial silt loam	*ML, MH			0	0	100	95-100	85-95
Lado, dry-----	4-20	*Medial silt loam	*ML			0	0	100	100	85-95
	20-48	*Clay loam, silt loam, gravelly loam	*CL			0	0	190-100	70-100	65-95
	48-64	*Loam, sandy loam, gravelly clay loam	*CL, SC			0	0	190-100	70-100	60-90

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
32: Brequito-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-5	*Ashy silt loam	*ML			0	0	74-100	73-100
	5-11	*Ashy silt loam, ashy loam	*ML			0	0-1	88-100	88-100
	11-20	*Silt loam, loam, sandy clay loam	*CL			0	0	92-100	91-100
	20-37	*Silty clay loam, gravelly loam, silt loam	*CL			0	0-8	76-100	75-100
	37-67	*Loam, sandy clay loam, very gravelly sandy loam, gravelly loamy sand	*CL, GM			0	0-18	40-100	38-100
	0-3	*Slightly decomposed plant material	*PT			0	0	100	100
	3-6	*Ashy silt loam	*ML			0	0	100	100
Mushel-----	6-13	*Ashy silt loam	*ML			0	0	87-100	87-100
	13-21	*Loam	*CL, CL-ML			0	0	91-100	91-100
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML			0	0-8	62-100	61-100
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML			0-9	0-9	66-100	65-100
	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM			0	0	68-100	67-100
			A-4, A-1						

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-			
			Unified	AASHTO	inches	3-10 inches	4	10	40	
33: Brequito-----	In				Pct	Pct				
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100	60-100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100	60-100
	3-5	*Ashy silt loam	*ML			0	0	174-100	73-100	72-100
	5-11	*Ashy silt loam, ash loam	*ML			0	0-1	188-100	88-100	86-100
	11-20	*Silt loam, loam, sandy clay loam	*CL			0	0	192-100	91-100	90-100
	20-37	*Silty clay loam, gravelly loam, silt loam	*CL			0	0-8	176-100	75-100	67-100
	37-67	*Loam, sandy clay loam, very gravelly sandy loam, gravelly loamy sand	*CL, GM			0	0-18	140-100	38-100	29-99
	0-3	*Slightly decomposed plant material	*PT			0	0	100	100	60-100
	3-6	*Ashy silt loam	*ML			0	0	100	100	90-96
Mushel-----	6-13	*Ashy silt loam	*ML			0	0	187-100	87-100	77-98
	13-21	*Loam	*CL, CL-ML			0	0	191-100	91-100	75-96
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML			0	0-8	162-100	61-100	50-96
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML			0-9	0-9	166-100	65-100	53-91
	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM			0	0	168-100	67-100	44-88



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
34: Brodeur, dry----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	0	100	100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, CL, GM, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	0	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	0	100	100
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	0	100	100
Brodeur-----	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-100
	21-59	*Loam, very fine sandy loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	0	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	0	100	100
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	0	100	100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-100
	21-59	*Loam, very fine sandy loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
35: Brodeur-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy silt loam	*ML, MH			0	0	100	100
	4-21	*Ashy silt loam, ashy loam	*ML			0-1	0-13	87-100	100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML			0-1	0-9	68-100	100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML			0	0	52-100	100
	0-3	*Slightly decomposed plant material	*PT			0	0	100	100
	3-6	*Ashy silt loam	*ML			0	0	100	100
	6-13	*Ashy silt loam	*ML			0	0	87-100	100
36: Brodeur, warm----	13-21	*Loam	*CL, CL-ML			0	0	91-100	100
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML			0	0-8	62-100	100
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML			0-9	0-9	66-100	100
	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM A-4, A-1			0	0	68-100	100
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy silt loam	*ML, MH			0	0	100	100
	4-21	*Ashy silt loam, ashy loam	*ML			0-1	0-13	87-100	100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML			0-1	0-9	68-100	100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML			0	0	52-100	100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
36: Mushel, dry-----	In				Pct	Pct			
	0-3	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	3-6	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	100	90-96
	6-13	*Ashy silt loam	*ML	*A-4, A-5	0	0	87-100	87-100	77-98
	13-21	*Loam	*CL, CL-ML	*A-4, A-6	0	0	91-100	91-100	75-96
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-6, A-2	0	0-8	62-100	61-100	50-96
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-2	0-9	0-9	66-100	65-100	53-91
37: Brodeer-----	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM	*A-2, A-6, A-4, A-1	0	0	68-100	67-100	44-88
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	99-100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-			
			Unified	AASHTO	inches	3-10 inches				
							4	10	40	
37: Bouldercreek----	In					Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100	60-10
	1-8	*Ashy loam	*ML, MH, GM	*A-5, A-4		0	0	64-100	63-100	60-10
	8-21	*Ashy loam, ashly silt loam, gravelly ashly sandy loam	*ML, MH, GM	*A-5, A-4		0	0	57-100	56-100	53-10
	21-27	*Gravelly loam, very cobble coarse sandy loam, very gravelly fine sandy loam	*CL-ML, GM, CL	*A-4, A-1, A-2		0-32	0-50	35-69	32-68	30-68
	27-34	*Very gravelly sandy loam, very gravelly loam, extremely cobbly sandy loam	*GC-GM, GP-GM, GW-GM, GC	*A-1, A-4, A-2		0-32	0-45	22-76	20-75	14-65
	34-53	*Very cobbly coarse sandy loam, extremely stony loam, very gravelly fine sandy loam	*GC-GM, SC, GP-GM, GW-GM	*A-1, A-4, A-2		0-32	17-65	24-100	21-100	12-69
	53-69	*Very gravelly loamy sand, extremely stony sandy loam, very cobble loamy sand	*GP-GM, SC, GP, GC-GM	*A-1, A-2		0-72	23-63	25-66	22-65	16-56
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100	60-10
38: Brodeer-----	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100	99-10
	4-21	*Ashy silt loam, ashly loam	*ML	*A-5, A-4		0-1	0-13	87-100	86-100	85-10
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6		0-1	0-9	68-100	67-100	61-10
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6		0	0	52-100	50-100	36-91

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	Pct	4		
							10	10	40
38: Flewsie, dry----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-10
	1-2	*Moderately decomposed plant material	*PT			0	0	100	60-10
	2-7	*Ashy silt loam	*ML, CL-ML, OH			0	0	100	97-99
	7-13	*Ashy silt loam	*CL-ML, ML			0	0	100	97-99
	13-16	*Ashy silt loam	*CL-ML, ML			0	0	87-100	86-100 83-99
	16-23	*Fine sandy loam, loam, gravelly loam	*CL-ML, CL			0	0-4	76-100	74-100 74-10
	23-31	*Fine sandy loam, loam, gravelly loam, very paragravelly fine sandy loam	*SC-SM, CL			0	0-4	70-100	68-100 61-10
	31-46	*Fine sandy loam, loam, paragravelly fine sandy loam	*SC-SM, SC			0	0	84-100	83-100 75-97
	46-62	*Loamy fine sand, gravelly fine sandy loam, extremely paragravelly fine sandy loam	*SC-SM, SC			0	0-12	75-100	73-100 66-97
39: Brodeer-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-10
	1-2	*Moderately decomposed plant material	*PT			0	0	100	60-10
	2-4	*Ashy silt loam	*ML, MH			0	0	100	99-10
	4-21	*Ashy silt loam, ashy loam	*ML			0-1	0-13	87-100	86-100 85-10
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML			0-1	0-9	68-100	67-100 61-10
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, CL, GM, SM, CL-ML, ML			0	0	52-100	50-100 36-91

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
39: Lostpete-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Medial silt loam	*ML, MH			0	0	100	100
	5-13	*Medial silt loam	*ML			0	0	100	100
	13-19	*Medial silt loam, medial loam	*ML			0	0	100	95-100
	19-29	*Silt loam, loam	*CL, CL-ML			0	0	100	95-100
	29-42	*Silt loam, loam	*CL, CL-ML			0	0	100	90-100
	42-52	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	90-100
	52-66	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	95-100	85-100
40: Brodeer, moist---	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy silt loam	*ML, MH			0	0	100	100
	4-21	*Ashy silt loam, ashy loam	*ML			0-1	0-13	87-100	86-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML			0-1	0-9	68-100	67-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML			0	0	52-100	50-100
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Medial silt loam	*ML, MH			0	0	100	100
	5-13	*Medial silt loam	*ML			0	0	100	100
Lostpete, moist	13-19	*Medial silt loam, medial loam	*ML			0	0	100	95-100
	19-29	*Silt loam, loam	*CL, CL-ML			0	0	100	95-100
	29-42	*Silt loam, loam	*CL, CL-ML			0	0	100	90-100
	42-52	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	90-100
	52-66	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	95-100	85-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number--		
			Unified	AASHTO	inches	>10	3-10		
							inches		
41: Brodeer, dry----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	99-100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91
	0-3	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	3-6	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	100	90-96
	6-13	*Ashy silt loam	*ML	*A-4, A-5	0	0	87-100	87-100	77-98
Mushel-----	13-21	*Loam	*CL, CL-ML	*A-4, A-6	0	0	91-100	91-100	75-96
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-6, A-2	0	0-8	62-100	61-100	50-96
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-2	0-9	0-9	66-100	65-100	53-91
	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM	*A-2, A-6, A-4, A-1	0	0	68-100	67-100	44-88
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	99-100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91
42: Brodeer-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	99-100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	3-10			
							4	10	40
42: Mushel-----	In				Pct	Pct			
	0-3	*Slightly decomposed plant material	*PT			0	0	100	100
	3-6	*Ashy silt loam	*ML			0	0	100	100
	6-13	*Ashy silt loam	*ML			0	0	87-100	87-100
	13-21	*Loam	*CL, CL-ML			0	0	91-100	91-100
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML			0	0-8	62-100	61-100
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML			0-9	0-9	66-100	65-100
	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM			0	0	68-100	67-100
43: Burntcreek-----	0-7	*Ashy loam	*CL			0	0	100	100
	7-11	*Loam, clay loam, silty clay loam, sandy loam	*CL, ML			0	0	100	100
	11-28	*Loam, silt loam, clay loam, coarse sandy loam	*CL			0	0	100	100
	28-36	*Loam, silt loam, sandy loam	*CL, CL-ML			0	0	91-100	91-100
	36-60	*Stratified silt loam to very gravelly loam	*SC, SP-SM, SM			0	0	100	100
44: Campra-----	0-3	*Slightly decomposed plant material	*PT			0	0	100	100
	3-7	*Gravelly ash silt loam	*GC, GC-GM, CL			0-18	0-34	55-74	54-73
	7-14	*Very gravelly ash silt loam, gravelly ashy silt loam, ash silt loam	*GC, GC-GM, CL			0-1	0-26	50-91	48-91
	14-20	*Very gravelly silt loam, very cobbly silt loam, very gravelly silty clay loam	*GC			0-8	0-30	38-52	36-51
	20-67	*Extremely gravelly silt loam, extremely stony clay loam, extremely cobbly silt loam, very gravelly clay loam	*GC, CH			0-54	8-68	15-56	15-55



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
45: Campra-----	In				Pct	Pct			
	0-3	*Slightly decomposed plant material	*PT			0	0	100	60-100
	3-7	*Gravelly ash silt loam	*GC, GC-GM, CL	*A-8		0-18	0-34	55-74	100 54-73 48-72
	7-14	*Very gravelly ash silt loam, gravelly ashy silt loam, ashy silt loam	*GC, GC-GM, CL	*A-4, A-6		0-1	0-26	50-91	48-91 43-87
	14-20	*Very gravelly silt loam, very cobbly silt loam, very gravelly silty clay loam	*GC	*A-2, A-7, A-6		0-8	0-30	38-52	36-51 31-51
	20-67	*Extremely gravelly silt loam, extremely stony clay loam, extremely cobbly silt loam, very gravelly clay loam	*GC, CH	*A-2, A-7		0-54	8-68	15-56	15-55 15-55
Sly-----	0-4	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100 60-100
	4-8	*Ashy silt loam	*CL-ML, CL, ML	*A-4		0	0	90-100	85-100 80-95
	8-19	*Ashy silt loam, ashy silty clay loam	*CL, ML	*A-4, A-6		0	0	90-100	85-100 80-95
	19-28	*Silty clay loam, silt loam, loam	*CL	*A-6, A-7		0	0	70-100	60-100 55-100
	28-37	*Silty clay loam, gravelly silty clay loam	*CL	*A-7, A-6		0	0	70-100	60-100 55-95
	37-66	*Cobbly clay loam, loam, gravelly loam	*CL, GC	*A-6, A-7, A-4		0	0-25	72-100	71-100 60-99
46: Carlinton-----	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100 60-100
	2-11	*Ashy silt loam, ashy silty clay loam	*CL-ML, ML, CL	*A-4		0	0	100	100 95-100
	11-22	*Silt loam, silty clay loam, clay loam	*CL	*A-4, A-6		0	0	100	95-100 90-100
	22-35	*Silt loam, silty clay loam	*CL	*A-6, A-4		0	0	100	95-100 90-100
	35-62	*Silty clay loam, silt loam	*CL	*A-6, A-7		0	0	100	95-100 90-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
47: Carlinton-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-11	*Ashy silt loam, ashy silty clay loam	*CL-ML, ML, CL	*A-4		0	0	100	95-100
	11-22	*Silt loam, silty clay loam, clay loam	*CL	*A-4, A-6		0	0	100	95-100
	22-35	*Silt loam, silty clay loam	*CL	*A-6, A-4		0	0	100	95-100
	35-62	*Silty clay loam, silt loam	*CL	*A-6, A-7		0	0	100	95-100
48: Carlinton-----	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-100
	2-11	*Ashy silt loam, ashy silty clay loam	*CL-ML, ML, CL	*A-4		0	0	100	95-100
	11-22	*Silt loam, silty clay loam, clay loam	*CL	*A-4, A-6		0	0	100	95-100
	22-35	*Silt loam, silty clay loam	*CL	*A-6, A-4		0	0	100	95-100
	35-62	*Silty clay loam, silt loam	*CL	*A-6, A-7		0	0	100	95-100
Kruse-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-100
	1-6	*Ashy loam	*SC-SM, SM, ML	*A-4		0	0	89-100	89-100
	6-14	*Ashy loam, ashy silt loam	*CL, ML, CL-ML	*A-4, A-6		0	0	89-100	89-100
	14-41	*Clay loam, loam, gravelly loam	*CL, GC-GM, CL-ML	*A-6, A-4, A-7		0	0-16	70-100	65-100
	41-48	*Sandy loam, loam, gravelly loam	*SC, CL	*A-4, A-6, A-2		0	0-8	70-100	65-100
	48-61	*Loamy sand, gravelly sandy loam, loam	*SC-SM, SC, SM	*A-2, A-1, A-6, A-4		0	0-16	65-100	60-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
49: Carlinton-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-11	*Ashy silt loam, ashy silty clay loam	*CL-ML, ML, CL	*A-8		0	0	100	100
	11-22	*Silt loam, silty clay loam, clay loam	*CL	*A-4		0	0	100	100
	22-35	*Silt loam, silty clay loam	*CL	*A-4, A-6		0	0	100	95-100
	35-62	*Silty clay loam, silt loam	*CL	*A-6, A-4 *A-6, A-7		0	0	100	90-100
Seddow-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML	*A-8		0	0	100	100
	3-5	*Ashy silt loam	*ML	*A-4		0	0	85-100	75-100
	5-13	*Ashy silt loam, gravelly ashy loam	*CL, CL-ML	*A-4, A-6		0	0	95-100	90-100
	13-35	*Silt loam, gravelly silty clay loam, gravelly loam	*CL, GC-GM, CL-ML	*A-6, A-4, A-7		0	0	65-95	60-90
	35-44	*Very gravelly silt loam, extremely gravelly clay loam, gravelly clay loam	*GC, GM, CL	*A-6, A-7, A-2		0	0-35	35-75	30-65
50: Caseycreek-----	44-54	*Unweathered bedrock			---	---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-4	*Ashy silt loam	*CL, ML, CL-ML	*A-4		0	0	100	100
	4-7	*Ashy loam, ashy silt loam	*CL, CL-ML	*A-4		0	0	100	100
	7-16	*Loam, sandy loam, gravelly loam	*CL, CL-ML, GC-GM	*A-4, A-6		0	0-8	70-100	68-100
	16-22	*Loam, gravelly loam	*CL, GC	*A-4, A-6		0	0-8	71-100	69-100
	22-48	*Sandy loam, loam, coarse sandy loam	*SC, SC-SM, SM	*A-4, A-2, A-6		0	0-8	84-100	83-100
	48-66	*Coarse sand, cobbly loamy sand	*SP-SM, SC-SM	*A-1, A-2		0	0-23	67-100	65-100

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
51: Cavendish-----	0-8	*Silt loam	*ML, CL	*A-4, A-6	0	0	82-100	81-100	73-97
	8-30	*Silty clay loam, clay loam, gravelly silt loam	*CL	*A-6, A-7	0	0	63-91	61-91	56-91
	30-43	*Gravelly clay loam, very cobbly silt loam, silty clay loam	*GC, CL	*A-6, A-2, A-7	0	0-33	48-83	46-82	38-78
	43-53	*Weathered bedrock			---	---	---	---	---
52: Cavendish-----	0-8	*Silt loam	*ML, CL	*A-4, A-6	0	0	82-100	81-100	73-97
	8-30	*Silty clay loam, clay loam, gravelly silt loam	*CL	*A-6, A-7	0	0	63-91	61-91	56-91
	30-43	*Gravelly clay loam, very cobbly silt loam, silty clay loam	*GC, CL	*A-6, A-2, A-7	0	0-33	48-83	46-82	38-78
	43-53	*Weathered bedrock			---	---	---	---	---
Taney-----	0-10	*Ashy silt loam	*CL, CL-ML	*A-4	0	0	100	100	95-10
	10-31	*Silt loam	*CL-ML, CL, ML	*A-4	0	0	100	100	95-10
	31-60	*Silty clay loam	*CL	*A-6, A-4, A-7	0	0	100	100	95-10

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
53: Cobbler-----	In				Pct	Pct			
	0-3	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	3-4	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	4-7	*Ashy loam	*ML		0	0	100	100	83-91
	7-16	*Ashy loam	*ML, CL, CL-ML		0	0-1	91-100	90-100	75-91
	16-26	*Gravelly sandy loam, loam, very gravelly loam	*SC-SM, SC, GM, SM		0	0	57-91	55-91	41-77
	26-50	*Coarse sandy loam, sandy loam, gravelly coarse sandy loam	*SC-SM, SC, GM, SM		0	0-8	63-92	61-91	45-77
	50-59	*Sandy loam, gravelly coarse sandy loam, loamy sand	*SC-SM, SC, SM		0	0-8	63-92	61-91	46-78
	59-68	*Loamy sand, coarse sandy loam, very gravelly coarse sandy loam	*SC-SM, SC, GM, SM		0	0-8	63-92	61-91	48-82
Aldermand-----	0-1	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	2-7	*Ashy loam	*ML, SM		0	0	90-100	85-100	65-90
	7-17	*Ashy loam, ashy silt loam, ashy coarse sandy loam	*ML, SM		0	0-5	95-100	85-100	65-90
	17-25	*Sandy loam, loam, gravelly loamy sand	*SC-SM, SM, CL-ML, CL		0	0-24	69-92	67-91	49-77
	25-33	*Sandy loam, gravelly loamy coarse sand, loam	*SC-SM, SM, CL		0	0-10	75-100	65-95	45-75
	33-44	*Gravelly sandy loam, coarse sand	*SM, SC-SM, GM		0	0-1	59-92	57-92	38-72
	44-62	*Very stony loamy sand, very gravelly loamy coarse sand	*SM, SC-SM, SP-SM, GP-GM		30-48	8-30	39-71	36-69	27-55

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	4		
							10		
	In				Pct	Pct			
54: Cobbler-----	0-3	*Slightly decomposed plant material	*PT			0	0	100	100
	3-4	*Moderately decomposed plant material	*PT			0	0	100	100
	4-7	*Ashy loam	*ML			0	0	100	100
	7-16	*Ashy loam	*ML, CL, CL-ML			0	0-1	91-100	90-100
	16-26	*Gravelly sandy loam, loam, very gravelly loam	*SC-SM, SC, GM, SM			0	0	57-91	55-91
	26-50	*Coarse sandy loam, sandy loam, gravelly coarse sandy loam	*SC-SM, SC, GM, SM			0	0-8	63-92	61-91
	50-59	*Sandy loam, gravelly coarse sandy loam, loamy sand	*SC-SM, SC, SM			0	0-8	63-92	61-91
	59-68	*Loamy sand, coarse sandy loam, very gravelly coarse sandy loam	*SC-SM, SC, GM, SM			0	0-8	63-92	61-91
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Ashy loam	*SM, GM, ML			0-1	0-18	68-91	66-91
Noil-----	9-19	*Very gravelly sandy loam, cobbly sandy loam, gravelly loamy sand	*GC-GM, GM, SC			0-1	0-30	48-70	46-69
	19-29	*Extremely gravelly sandy loam, very gravelly loam, very gravelly loamy sand	*GP-GC, GM, GP-GM			0-17	0-44	30-60	27-58
	29-43	*Extremely gravelly sandy loam, very gravelly loamy sand, extremely cobbly sandy loam, extremely gravelly loamy coarse sand	*GP-GM, GM, GC-GM, GM			0-24	8-49	20-64	17-62
	43-53	*Weathered bedrock				---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
55: Cranberry-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam	*ML, MH			0	0	100	100
	5-11	*Ashy silt loam	*ML, MH			0	0	100	100
	11-16	*Ashy silt loam	*ML, MH			0	0	100	100
	16-22	*Silt loam, silty clay loam	*CL			0	0	100	95-100
	22-32	*Silt loam	*CL			0	0	100	95-100
	32-40	*Silty clay loam, silt loam, gravelly silt loam	*CL			0	0	100	95-100
	40-50	*Silty clay loam, silt loam, gravelly silt loam	*CL			0	0	80-100	75-100
	50-57	*Clay loam, loam	*CL			0	0	95-100	85-100
	57-62	*Clay loam, loam, very paragravelly silty clay loam	*CL, CL-ML			0	0	95-100	85-100
Riswold-----	0-1	*Slightly decomposed plant material	*PT						
	1-9	*Ashy silt loam	*ML			0	0	95-100	90-100
	9-17	*Ashy silt loam, ashy loam	*ML			0	0	90-100	85-100
	17-27	*Silt loam, gravelly silt loam	*CL			0	0	80-100	75-100
	27-44	*Silt loam, gravelly silt loam, silty clay loam	*CL			0	0-8	75-100	70-100
	44-60	*Cobbly silty clay loam	*CL, GC			0	3-21	54-87	50-87
	60-72	*Very cobbly silty clay loam	*CL, GC			0	5-51	37-68	32-67
56: Crumarine-----	0-3	*Silt loam	*CL, CL-ML			0	0	91-100	90-100
	3-13	*Loam, silt loam, fine sandy loam	*CL-ML, CL			0-1	0-8	91-100	90-100
	13-44	*Sandy loam, loam, gravelly sand, gravelly sandy loam	*SM, CL, GM A-1			0-5	0-17	50-100	48-100
	44-60	*Gravelly sand	*SM, SP-SM			0	0	70-87	46-86

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4		
							10	10	40
57: Dam-----	In				Pct	Pct			
	---	---	---	---	---	---	---	---	---
58: Driscoll-----	0-13	*Silt loam	*CL	*A-6, A-4	0	0	100	100	90-10
	13-20	*Silty clay loam, silt loam	*CL	*A-6, A-4, A-7	0	0	85-100	80-100	75-10
	20-24	*Silt loam, silt	*CL, CL-ML	*A-4, A-6	0	0	100	100	95-10
	24-54	*Silty clay, silty clay loam	*CH	*A-7	0	0	95-100	90-100	85-10
	54-70	*Silty clay, silty clay loam	*CH	*A-7	0	0-1	95-100	90-100	85-10
59: Driscoll-----	0-13	*Silt loam	*CL	*A-6, A-4	0	0	100	100	90-10
	13-20	*Silty clay loam, silt loam	*CL	*A-6, A-4, A-7	0	0	85-100	80-100	75-10
	20-24	*Silt loam, silt	*CL, CL-ML	*A-4, A-6	0	0	100	100	95-10
	24-54	*Silty clay, silty clay loam	*CH	*A-7	0	0	95-100	90-100	85-10
	54-70	*Silty clay, silty clay loam	*CH	*A-7	0	0-1	95-100	90-100	85-10
Larkin-----	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-21	*Silt loam	*ML, CL, CL-ML	*A-4, A-6	0	0	100	90-100	90-10
	21-62	*Silty clay loam, silt loam	*CL	*A-6, A-4, A-7	0	0	100	90-100	90-10



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	inches	4	10	40
60: Dullaxe, high elevation-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-7	*Ashy loam	*ML, MH	*A-5, A-4	0	0	95-100	95-100	65-95
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4	0	0	95-100	90-100	60-95
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4	0	0-10	90-100	75-100	60-90
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4	0	0-24	75-100	70-95	50-80
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1	0	0-15	80-100	65-100	40-70
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3	0	0-3	75-100	70-100	55-85
Dullaxe-----	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-7	*Ashy loam	*ML, MH	*A-5, A-4	0	0	95-100	95-100	65-95
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4	0	0	95-100	90-100	60-95
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4	0	0-10	90-100	75-100	60-90
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4	0	0-24	75-100	70-95	50-80
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1	0	0-15	80-100	65-100	40-70
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3	0	0-3	75-100	70-100	55-85

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct inches	4		
							10	10	40
61: Dullaxe, dry----	In					Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, MH	*A-5, A-4		0	0	95-100	95-100
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4		0	0	95-100	90-100
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4		0	0-10	90-100	75-100
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4		0	0-24	75-100	70-95
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1		0	0-15	80-100	65-100
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3		0	0-3	75-100	70-100
	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	2-7	*Ashy loam	*ML, MH	*A-5, A-4		0	0	95-100	95-100
Dullaxe, wet----	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4		0	0	95-100	90-100
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4		0	0-10	90-100	75-100
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4		0	0-24	75-100	70-95
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1		0	0-15	80-100	65-100
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3		0	0-3	75-100	70-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
62: Dullaxe-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, MH	*A-5, A-4		0	0	95-100	95-100
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4		0	0	95-100	90-100
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4		0	0-10	90-100	75-100
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4		0	0-24	75-100	70-95
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1		0	0-15	80-100	65-100
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3		0	0-3	75-100	70-100
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
Brodeer-----	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4		0-1	0-13	87-100	86-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6		0-1	0-9	68-100	67-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6		0	0	52-100	50-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
63: Dullaxe-----	In					Pct			
	0-2	*Slightly decomposed plant material	*PT				0	0	100
	2-7	*Ashy loam	*ML, MH	*A-5, A-4			0	0	95-100
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4			0	0	95-100
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4			0	0-10	90-100
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4			0	0-24	75-100
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1			0	0-15	80-100
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3			0	0-3	75-100
	0-1	*Slightly decomposed plant material	*PT	*A-8			0	0	100
	1-2	*Moderately decomposed plant material	*PT	*A-8			0	0	100
Brodeer-----	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4			0	0	100
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4			0-1	0-13	87-100
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6			0-1	0-9	68-100
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6			0	0	52-100
									100
									100
									100
									100
									100
									100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
64: Dullaxe-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, MH	*A-5, A-4		0	0	95-100	95-100
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4		0	0	95-100	90-100
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4		0	0-10	90-100	75-100
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4		0	0-24	75-100	70-95
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1		0	0-15	80-100	65-100
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3		0	0-3	75-100	70-100
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
Judgetown-----	2-4	*Ashy loam	*ML, MH, GM	*A-5, A-4		0	0	66-100	65-100
	4-17	*Ashy loam, ashy silt loam, gravelly ashy loam	*ML, MH, GM	*A-5, A-4		0	0	67-100	66-100
	17-30	*Sandy loam, loam, gravelly loamy sand	*SC, SM	*A-4, A-6, A-1		0-1	0-16	67-100	66-100
	30-52	*Loamy coarse sand, gravelly coarse sandy loam, extremely gravelly loamy coarse sand, loamy sand	*SM, SC-SM, SP-SM	*A-1, A-2		0-16	0-23	60-92	58-92
	52-62	*Weathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	4	10	40
65: Dullaxe-----	In					Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, MH	*A-5, A-4		0	0	95-100	95-100
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4		0	0	95-100	90-100
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4		0	0-10	90-100	75-100
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4		0	0-24	75-100	70-95
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1		0	0-15	80-100	65-100
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3		0	0-3	75-100	70-100
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
Judgetown, moist	2-4	*Ashy loam	*ML, MH, GM	*A-5, A-4		0	0	66-100	65-100
	4-17	*Ashy loam, ashy silt loam, gravelly ashy loam	*ML, MH, GM	*A-5, A-4		0	0	67-100	66-100
	17-30	*Sandy loam, loam, gravelly loamy sand	*SC, SM	*A-4, A-6, A-1		0-1	0-16	67-100	66-100
	30-52	*Loamy coarse sand, gravelly coarse sandy loam, extremely gravelly loamy coarse sand, loamy sand	*SM, SC-SM, SP-SM	*A-1, A-2		0-16	0-23	60-92	58-92
	52-62	*Weathered bedrock				---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
66: Dullaxe-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, MH			0	0	95-100	95-100
	7-19	*Ashy loam, ashy silt loam	*ML, MH			0	0	95-100	90-100
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL			0	0-10	90-100	75-100
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM			0	0-24	75-100	70-95
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM			0	0-15	80-100	65-100
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM			0	0-3	75-100	70-100
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-6	*Medial silt loam	*ML, MH			0	0	100	95-100
67: Dumps, wood slash-----	6-29	*Medial silt loam, gravelly medial silt loam, gravelly medial loam	*ML, SM, MH			0	0	85-100	70-100
	29-48	*Sandy loam, gravelly loam, cobbly coarse sandy loam	*SC-SM, CL, SM			0	0-15	65-100	55-95
	48-62	*Loamy sand, cobbly sandy loam, very gravelly loamy coarse sand	*SC-SM, SP-SM, SC, SM			0-10	0-5	60-85	60-80
	---	---	---	---	---	---	---	---	---





Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
70: Elkberry-----	In				Pct	Pct			
	0-1	*Moderately decomposed plant material	*PT			0	0	100	60-100
	1-3	*Medial silt loam	*ML, MH			0	0	100	90-100
	3-16	*Medial silt loam	*ML, MH			0	0	100	90-100
	16-19	*Silt loam, loam	*CL, CL-ML			0	0	100	95-100
	19-25	*Silt loam	*CL, CL-ML			0	0	95-100	80-95
	25-36	*Silt loam	*CL			0	0	90-100	85-100
	36-45	*Silty clay loam, silt loam	*CL			0	0-5	91-100	85-100
	45-55	*Silty clay loam, silt loam	*CL			0	0-5	91-100	85-100
	55-65	*Loam, clay loam, sandy clay loam	*CL, CH			0	0	100	75-90
Elkberry, wet----	0-1	*Moderately decomposed plant material	*PT			0	0	100	60-100
	1-3	*Medial silt loam	*ML, MH			0	0	100	90-100
	3-16	*Medial silt loam	*ML, MH			0	0	100	90-100
	16-19	*Silt loam, loam	*CL, CL-ML			0	0	100	95-100
	19-25	*Silt loam	*CL, CL-ML			0	0	95-100	80-95
	25-36	*Silt loam	*CL			0	0	90-100	85-100
	36-45	*Silty clay loam, silt loam	*CL			0	0-5	91-100	85-100
	45-55	*Silty clay loam, silt loam	*CL			0	0-5	91-100	85-100
	55-65	*Loam, clay loam, sandy clay loam	*CL, CH			0	0	100	75-90
71: Elkberry-----	0-1	*Moderately decomposed plant material	*PT			0	0	100	60-100
	1-3	*Medial silt loam	*ML, MH			0	0	100	90-100
	3-16	*Medial silt loam	*ML, MH			0	0	100	90-100
	16-19	*Silt loam, loam	*CL, CL-ML			0	0	100	95-100
	19-25	*Silt loam	*CL, CL-ML			0	0	95-100	80-95
	25-36	*Silt loam	*CL			0	0	90-100	85-100
	36-45	*Silty clay loam, silt loam	*CL			0	0-5	91-100	85-100
	45-55	*Silty clay loam, silt loam	*CL			0	0-5	91-100	85-100
	55-65	*Loam, clay loam, sandy clay loam	*CL, CH			0	0	100	75-90

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
71: Dworshak-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-11	*Ashy silt loam	*ML, MH			0	0	100	100
	11-18	*Ashy silt loam, ashy loam	*ML, MH			0	0	100	100
	18-31	*Silt loam, gravelly clay loam	*CL			0	0	68-100	67-100
	31-63	*Very gravelly clay loam, gravelly clay loam	*GC, CL			0	9-39	45-74	43-73
72: Elkridge-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-6	*Ashy silt loam	*ML			0	0	80-100	75-100
	6-13	*Ashy silt loam gravelly ashy loam	*ML			0	0	80-100	75-100
	13-41	*Very gravelly silt loam, gravelly silt loam, very cobbly silty clay loam	*GC, GC-GM, CL			0-50	0-65	35-80	30-75
	41-62	*Extremely gravelly silt loam, extremely gravelly silty clay loam, extremely stony clay loam	*GC			0-43	0-64	25-41	22-40
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Ashy silt loam	*ML			0	0	95-100	90-100
Riswold-----	9-17	*Ashy silt loam, ashy loam	*ML			0	0	90-100	85-100
	17-27	*Silt loam, gravelly silt loam	*CL			0	0	80-100	75-100
	27-44	*Silt loam, gravelly silt loam, silty clay loam	*CL			0	0-8	75-100	70-100
	44-60	*Cobbly silty clay loam	*CL, GC			0	3-21	54-87	50-87
	60-72	*Very cobbly silty clay loam	*CL, GC			0	5-51	37-68	34-67

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
73: Elkridge-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-6	*Ashy silt loam	*ML			0	0	80-100	75-100
	6-13	*Ashy silt loam, gravelly ashly loam	*ML			0	0	80-100	75-100
	13-41	*Very gravelly silt loam, gravelly silt loam, very cobbly silty clay loam	*GC, GC-GM, CL		0-50	0-65	35-80	30-75	25-70
	41-62	*Extremely gravelly silt loam, extremely gravelly silty clay loam, extremely stony clay loam	*GC		0-43	0-64	25-41	22-40	20-40
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Ashy silt loam	*ML			0	0	95-100	90-100
	9-17	*Ashy silt loam, ashly loam	*ML			0	0	90-100	85-100
	17-27	*Silt loam, gravelly silt loam	*CL			0	0	80-100	75-100
Riswold-----	27-44	*Silt loam, gravelly silt loam, silty clay loam	*CL			0	0-8	75-100	70-100
	44-60	*Cobbly silty clay loam	*CL, GC			0	3-21	54-87	50-87
	60-72	*Very cobbly silty clay loam	*CL, GC			0	5-51	37-68	32-67
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-8	*Medial loam	*ML, MH			0	0	100	90-100
	8-17	*Medial loam, medial silt loam	*ML, MH			0	0	100	90-100
	17-25	*Gravelly sandy loam, loam, cobbly loam	*SC-SM, CL			0	0-15	80-95	70-85
	25-56	*Gravelly loamy coarse sand, loamy coarse sand, fine gravelly coarse sand	*SM, SC-SM, SW-SM			0	0-15	80-95	70-80
	56-66	*Weathered bedrock			---	---	---	---	---
74: Fico, dry-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-8	*Medial loam	*ML, MH			0	0	100	90-100
	8-17	*Medial loam, medial silt loam	*ML, MH			0	0	100	90-100
	17-25	*Gravelly sandy loam, loam, cobbly loam	*SC-SM, CL			0	0-15	80-95	70-85
	25-56	*Gravelly loamy coarse sand, loamy coarse sand, fine gravelly coarse sand	*SM, SC-SM, SW-SM			0	0-15	80-95	70-80
	56-66	*Weathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
74: Huchberit, warm--	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-6	*Medial silt loam	*ML, MH			0	0	100	100
	6-14	*Medial silt loam, medial loam	*ML, MH			0	0	100	100
	14-21	*Medial silt loam, medial loam	*ML			0	0	95-100	90-95
	21-28	*Gravelly loam, loam	*SC-SM, CL GC-GM, CL			0	0-10	70-100	65-100
	28-36	*Gravelly sandy loam, gravelly coarse sandy loam, sandy loam, gravelly loam	*SC, CL, SC-SM			0	0	70-100	65-100
	36-48	*Gravelly sandy loam, gravelly coarse sandy loam, very gravelly sandy loam	*SC-SM, GM, SC, SM			0	0	60-85	55-75
	48-62	*Loamy coarse sand, very gravelly sandy loam, sandy loam	*SC-SM, SM			0	0	65-90	55-85
75: Fico-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-8	*Medial loam	*ML, MH			0	0	100	90-100
	8-17	*Medial loam, medial silt loam	*ML, MH			0	0	100	90-100
	17-25	*Gravelly sandy loam, loam, cobbly loam	*SC-SM, CL A-1			0	0-15	80-95	70-85
	25-56	*Gravelly loamy coarse sand, loamy coarse sand, fine gravelly coarse sand	*SM, SW-SM, SC-SM			0	0-15	80-95	70-80
	56-66	*Weathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
75: Weitas-----	In				Pct	Pct			
	0-14	*Medial loam	*OL, OH	*A-5, A-4	0	0-5	95-100	85-100	75-90
	14-22	*Medial loam, gravelly medial loam	*ML, OH, SM	*A-5, A-4	0	0-10	85-100	70-90	60-80
	22-37	*Gravelly loam, loam, very gravelly coarse sandy loam	*GC, ML, GC-GM	*A-4, A-1	0	0-15	50-85	50-85	35-70
	37-43	*Gravelly loamy sand	*SM, SC-SM, GM	*A-2, A-1	0	0-8	57-100	55-100	43-85
76: Flewsie, high precipitation--	43-60	*Very gravelly loam, loamy coarse sand, gravelly loamy sand	*GC-GM, GC, GM	*A-2, A-4, A-1	0	0-25	50-85	45-85	40-75
	0-4	*Ashy silt loam	*ML, MH	*A-4, A-5	0	0	90-100	85-100	80-100
	4-15	*Ashy silt loam	*ML, MH	*A-4, A-5	0	0	90-100	85-100	80-100
	15-37	*Fine sandy loam, very fine sandy loam, loam	*ML, CL-ML, SM	*A-4, A-2	0	0	80-100	75-100	55-85
	37-60	*Loamy very fine sand, loamy fine sand, fine sandy loam	*SM	*A-2, A-1	0	0	75-100	70-100	50-80

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-			
			Unified	AASHTO	inches	Pct	inches	Pct	sieve number-	
77: Flawsie, low precipitation--	In					Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10	
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10	
	2-7	*Ashy silt loam	*ML, CL-ML, OH	*A-4, A-5	0	0	100	100	97-99	
	7-13	*Ashy silt loam	*CL-ML, ML	*A-4	0	0	100	100	97-99	
	13-16	*Ashy silt loam	*CL-ML, ML	*A-4	0	0	87-100	86-100	83-99	
	16-23	*Fine sandy loam, loam, gravelly loam	*CL-ML, CL	*A-4, A-6	0	0-4	76-100	74-100	74-10	
	23-31	*Fine sandy loam, loam, gravelly loam, very paragravelly fine sandy loam	*SC-SM, CL	*A-4, A-6, A-2	0	0-4	70-100	68-100	61-10	
	31-46	*Fine sandy loam, loam, paragravelly fine sandy loam	*SC-SM, SC	*A-4, A-2	0	0	84-100	83-100	75-97	
	46-62	*Loamy fine sand, gravelly fine sandy loam, extremely paragravelly fine sandy loam	*SC-SM, SC	*A-2, A-4	0	0-12	75-100	73-100	66-97	

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	Pct	>10   3-10   4		
77: Flewsie, dry----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML, CL-ML, OH			0	0	100	100
	7-13	*Ashy silt loam	*CL-ML, ML			0	0	100	100
	13-16	*Ashy silt loam	*CL-ML, ML			0	0	87-100	86-100
	16-23	*Fine sandy loam, loam, gravelly loam	*CL-ML, CL			0	0-4	76-100	74-100
	23-31	*Fine sandy loam, loam, gravelly loam, very paragravelly fine sandy loam	*SC-SM, CL			0	0-4	70-100	68-100
	31-46	*Fine sandy loam, loam, paragravelly fine sandy loam	*SC-SM, SC			0	0	84-100	83-100
	46-62	*Loamy fine sand, gravelly fine sandy loam, extremely paragravelly fine sandy loam	*SC-SM, SC			0	0-12	75-100	73-100
78: Floodwood-----	0-5	*Ashy silt loam	*ML, OH			0	0	90-100	85-100
	5-12	*Ashy silt loam	*ML, MH			0	0	90-100	85-100
	12-38	*Loam, gravelly loam, silt loam	*CL, CL-ML			0	0-10	75-100	70-100
	38-60	*Gravelly fine sandy loam, fine sandy loam, gravelly loamy fine sand	*SM, SC-SM			0	0-15	70-95	65-90
			*A-4, A-1, A-2						

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
79: Floodwood, warm	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-3	*Ashy loam	*ML, OL			0	0	85-100	75-100
	3-13	*Ashy loam, ashy silt loam	*ML			0	0	85-100	75-100
	13-35	*Loam, gravelly loam, cobbly silt loam	*CL, SC-SM, CL-ML			0	0-10	80-100	70-100
	35-55	*Fine sandy loam, very fine sandy loam, sandy loam, loam	*SC, CL, SC-SM			0	0-20	75-100	65-95
	55-63	*Fine sandy loam, loam, loamy sand	*SC-SM, SC, SM			0	0-15	80-100	75-95
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-5	*Ashy loam	*ML			0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL			0	0	100	95-100
80: Floodwood-----	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM			0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam, silty clay loam	*SC, SC-SM, GC, CL			0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM			0	2-7	60-80	55-80
	0-5	*Ashy silt loam	*ML, OH			0	0	90-100	85-100
	5-12	*Ashy silt loam	*ML, MH			0	0	90-100	85-100
	12-38	*Loam, gravelly loam, silt loam	*CL, CL-ML			0	0-10	75-100	70-100
	38-60	*Gravelly fine sandy loam, fine sandy loam, gravelly loamy fine sand	*SM, SC-SM A-2			0	0-15	70-95	65-90



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4		
							10	10	40
80: Keeler, warm----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*CL, ML, CL-ML			0	0	100	90-100
	7-18	*Ashy silt loam	*CL, CL-ML			0	0	100	90-100
	18-38	*Loam, silt loam, silty clay loam	*CL			0	0	100	85-100
	38-62	*Sandy loam, sandy clay loam, fine gravelly clay loam	*SC, CL		0-10	0	100	45-90	45-75
81: Floodwood-----	0-5	*Ashy silt loam	*ML, OH						
	5-12	*Ashy silt loam	*ML, MH			0	0	90-100	85-100
	12-38	*Loam, gravelly loam, silt loam	*CL, CL-ML			0	0-10	75-100	70-100
	38-60	*Gravelly fine sandy loam, fine sandy loam, gravelly loamy fine sand	*SM, SC-SM			0	0-15	70-95	65-90
Keeler, warm----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*CL, ML, CL-ML			0	0	100	90-100
	7-18	*Ashy silt loam	*CL, CL-ML			0	0	100	90-100
	18-38	*Loam, silt loam, silty clay loam	*CL			0	0	100	85-100
	38-62	*Sandy loam, sandy clay loam, fine gravelly clay loam	*SC, CL		0-10	0	100	45-90	45-75

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	<i>In</i>				<i>Pct</i>	<i>Pct</i>			
82: Flumecreek-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-10	*Ashy loam	*ML, MH			0	0	85-100	85-100
	10-21	*Ashy loam, ashy silt loam, gravelly ashy loam	*ML, GM, MH			0	0-14	66-100	64-100
	21-32	*Very cobbly loam, very gravelly loam, extremely cobbly loam	*GC, CL, GC-GM			0-18	0-52	39-74	36-73
	32-43	*Very gravelly sandy clay loam, very cobbly loam, very cobbly sandy loam	*GC, SC			0-9	9-45	37-64	34-62
	43-52	*Extremely stony sandy clay loam, very gravelly sandy clay loam, very cobbly sandy loam	*GC, GP-GC, SC			0-38	17-38	24-65	21-63
	52-67	*Extremely stony sandy loam, extremely cobbly loam, very gravelly sandy clay loam	*GC, GP-GC, SC, GC-GM			0-43	16-54	25-79	21-78

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	inches	4		
							10	10	40
83: Flumecreek-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	2-10	*Ashy loam	*ML, MH	*A-5, A-4	0	0	85-100	85-100	85-10
	10-21	*Ashy loam, ashy silt loam, gravelly ashy loam	*ML, GM, MH	*A-5, A-4	0	0-14	66-100	64-100	64-10
	21-32	*Very cobbly loam, very gravelly loam,	*GC, CL, GC-GM	*A-4, A-6, A-2	0-18	0-52	39-74	36-73	36-73
	32-43	*Extremely cobbly loam extremely cobbly loam clay loam, very cobbly loam, very cobbly sandy loam	*GC, SC	*A-2, A-6	0-9	9-45	37-64	34-62	33-62
	43-52	*Extremely stony sandy clay loam, very gravelly sandy clay loam, very cobbly sandy loam	*GC, GP-GC, SC	*A-2, A-6, A-1	0-38	17-38	24-65	21-63	18-63
	52-67	*Extremely stony sandy loam, extremely cobbly loam, very gravelly sandy clay loam	*GC, GP-GC, SC, GC-GM	*A-2, A-6, A-1	0-43	16-54	25-79	21-78	15-67
	0-3	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
Stepoff-----	3-8	*Medial loam	*ML, MH	*A-5, A-4	0	0	90-100	85-95	80-90
	8-24	*Medial loam, cobbly medial silt loam, medial silt loam	*ML	*A-5, A-4	0	0-15	80-100	75-95	65-90
	24-38	*Gravelly loam, loam, loamy coarse sand	*SC, GC-GM, CL, SC-SM	*A-4, A-6	0	0-15	65-90	60-85	55-75
	38-46	*Gravelly loam, gravelly sandy loam, loamy coarse sand	*CL, GC-GM, SC-SM	*A-4, A-1, A-2, A-6	0	0-15	60-90	55-85	35-70
	46-63	*Very cobbly loam, very gravelly loamy sand, coarse sand	*GC-GM, SC-SM, GP-GM, SC, GW-GM, GC	*A-2, A-1	0	0-35	50-85	45-80	30-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
83: Dworshak, dry----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-11	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	0	100	100
	11-18	*Ashy silt loam, ashy loam	*ML, MH	*A-5, A-4	0	0	0	100	100
	18-31	*Silt loam, gravelly clay loam	*CL	*A-6, A-4	0	0	0	68-100	67-100
	31-63	*Very gravelly clay loam, gravelly clay loam	*GC, CL	*A-6, A-7, A-2	0	9-39	45-74	43-73	37-73
84: Fordcreek-----	0-6	*Loam	*CL, SC-SM, CL-ML	*A-4, A-6	0-1	0-8	76-100	75-100	64-95
	6-16	*Loam, clay loam, gravelly sandy loam, sandy clay loam	*CL, GC-GM, CL-ML	*A-6, A-4	0-1	0-9	66-100	65-100	53-96
	16-27	*Clay loam, gravelly clay loam, sandy loam	*CL, GC-GM, CL-ML	*A-6, A-2, A-4, A-7	0-1	0-8	67-100	66-100	50-97
	27-41	*Clay loam, sandy loam, very cobbly clay loam	*CL, GC-GM, CL-ML, SC-SM, SC	*A-6, A-2, A-7, A-4	0-1	0-24	64-100	63-100	44-96
	41-51	*Weathered bedrock			---	---	---	---	---
	0-6	*Loam	*CL, SC-SM, CL-ML	*A-4, A-6	0-1	0-8	76-100	75-100	64-95
	6-16	*Loam, clay loam, gravelly sandy loam, sandy clay loam	*CL, GC-GM, CL-ML	*A-6, A-4	0-1	0-9	66-100	65-100	53-96
85: Fordcreek-----	16-27	*Clay loam, gravelly clay loam, sandy loam	*CL, GC-GM, CL-ML	*A-6, A-2, A-4, A-7	0-1	0-8	67-100	66-100	50-97
	27-41	*Clay loam, sandy loam, very cobbly clay loam	*CL, GC-GM, CL-ML, SC-SM, SC	*A-6, A-2, A-7, A-4	0-1	0-24	64-100	63-100	44-96
	41-51	*Weathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
86: Garveson, high precipitation--	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	60-100
	2-4	*Ashy silt loam	*ML	*A-5, A-4	0	0	0	73-100	72-100
	4-18	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0	0	0	73-100	72-100
	18-25	*Very gravelly loamy coarse sand, gravelly loamy sand	*SM, SW-SM, GP-GM	*A-1	0	0-48	21-92	18-91	10-56
	25-62	*Very gravelly coarse sand, very gravelly loamy coarse sand	*SP-SM, SP, SW-SM	*A-1	0-26	7-15	11-69	7-68	3-33
Floodwood-----	0-5	*Ashy silt loam	*ML, OH	*A-4, A-5	0	0	0	90-100	85-100
	5-12	*Ashy silt loam	*ML, MH	*A-4, A-5	0	0	0	90-100	85-100
	12-38	*Loam, gravelly loam, silt loam	*CL, CL-ML	*A-4, A-6	0	0-10	75-100	70-100	60-90
	38-60	*Gravelly fine sandy loam, fine sandy loam, gravelly loamy fine sand	*SM, SC-SM	*A-4, A-1, A-2	0	0-15	70-95	65-90	50-75
87: Gramil-----	0-12	*Ashy silty clay loam	*CL	*A-6, A-4	0	0	0	100	95-100
	12-19	*Ashy silt loam, ashy silty clay loam, ashy loam	*CL	*A-6, A-4	0	0	0	100	90-100
	19-27	*Clay loam, silt loam, loam, silty clay loam	*CL	*A-6, A-4	0	0	0	100	95-100
	27-39	*Clay, silty clay	*CH	*A-7	0	0	0	100	95-100
	39-70	*Clay, silty clay loam, sandy clay	*CH, CL	*A-7, A-4, A-6	0	0	0	95-100	90-100

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
87: Lewhand-----	0-8	*Ashy silty clay loam	*CL, CL-ML A-4	*A-7, A-6, A-4	0	0	100	100	90-10
	8-12	*Silty clay loam, loam, silt loam	*CL, CL-ML A-4	*A-6, A-7, A-4	0	0	100	100	85-10
	12-18	*Silt loam, loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	18-32	*Silt loam, silty clay, silty clay loam	*CL, CL-ML	*A-6, A-4, A-7	0	0	100	100	90-10
	32-60	*Stratified silt loam to sand	*CL, ML, CL-ML, SM, CH, SC, SC-SM	*A-4, A-6, A-1, A-7, A-2	0	0	100	100	35-10
88: Gramil-----	0-12	*Ashy silty clay loam	*CL	*A-6, A-4	0	0	100	100	95-10
	12-19	*Ashy silt loam, ashy silty clay loam, ashy loam	*CL	*A-6, A-4	0	0	100	100	90-10
	19-27	*Clay loam, silt loam, loam, silty clay loam	*CL	*A-6, A-4	0	0	100	95-100	90-10
	27-39	*Clay, silty clay	*CH	*A-7	0	0	100	95-100	90-10
	39-70	*Clay, silty clay loam, sandy clay	*CH, CL	*A-7, A-4, A-6	0	0	95-100	90-100	85-10
Reggear-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-8	*Ashy silt loam	*ML	*A-4	0	0	100	100	90-10
	8-13	*Ashy silt loam	*ML, CL-ML, CL	*A-4, A-6	0	0	100	100	90-10
	13-22	*Silt loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	22-31	*Silt loam, silty clay loam	*CL	*A-6, A-4	0	0	100	100	90-10
	31-60	*Silt loam, clay, silty clay loam	*CL, CH	*A-6, A-7	0	0	100	100	90-10
	60-86	*Silt loam, silty clay loam, clay loam	*CL	*A-6, A-4, A-7	0	0	100	100	90-10

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
89: Grandad-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
90: Grandad, dry----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
90: Grandad-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
91: Grandad, dry----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
91: Grandad-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
92: Grandad-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
92: Rettig-----	In				Pct	Pct			
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-7	*Ashy loam	*ML			0	0	92-100	70-100
	7-27	*Ashy loam, ashy silt loam	*ML			0	0	86-100	65-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM			0	0	80-100	60-100
	34-47	*Gravelly sandy loam, cobbley loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL		0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbley sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC		0-8	0-70	65-91	40-91	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC		0	9-32	60-90	35-81	25-65
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH			0	0	100	100
93: Granddad, wet----	3-19	*Ashy silt loam, ashy loam	*ML			0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML			0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM		0-9	0-17	65-91	63-91	59-91
	39-45	*Gravelly loam, cobbley sandy loam, loam	*CL-ML, CL, GC-GM		0-9	0-17	72-91	71-91	69-91
	45-58	*Loam, sandy loam, cobbley sandy loam	*CL-ML, SM, CL		0-8	0-8	75-92	74-91	68-91
	58-64	*Paragravelly sandy loam, cobbley sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC		0-8	0-16	65-92	64-91	45-79

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-				
			Unified	AASHTO	inches	Pct	inches				
							>10	3-10	4	10	40
93: Rettig, wet-----	In					Pct	Pct				
	0-1	*Moderately decomposed plant material	*PT				0	0	100	100	60-100
	1-7	*Ashy loam	*ML				0	0	92-100	70-100	66-100
	7-27	*Ashy loam, ashy silt loam	*ML				0	0	86-100	65-100	62-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM				0	0	80-100	60-100	45-87
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL			0-17	0-42	70-100	50-100	35-86	
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC			0-8	0-70	65-91	40-91	30-75	
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC			0	9-32	60-90	35-81	25-65	
	0-1	*Slightly decomposed plant material	*PT				0	0	100	100	60-100
	1-3	*Ashy silt loam	*ML, MH				0	0	100	100	98-100
94: Grandad, dry-----	3-19	*Ashy silt loam, ashy loam	*ML				0	0	91-100	91-100	89-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML				0	0	77-100	76-100	70-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM			0-9	0-17	65-91	63-91	59-91	
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM			0-9	0-17	72-91	71-91	69-91	
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL			0-8	0-8	75-92	74-91	68-91	
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC			0-8	0-16	65-92	64-91	45-79	

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
94: Scand-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-4	*Ashy silt loam	*ML, MH			0	0	100	100
	4-16	*Ashy silt loam	*ML			0	0	100	100
	16-27	*Silt loam, loam	*CL, CL-ML			0	0	95-100	85-100
	27-53	*Loam, silt loam, sandy clay loam	*CL, CL-ML			0	0	95-100	85-100
95: Grangemont-----	53-63	*Loamy sand, loam, gravelly sandy loam	*SC, SC-SM			0	0	77-100	76-100
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-7	*Ashy silt loam	*ML, OH			0	0	100	100
	7-14	*Ashy silt loam, ashy loam	*ML			0	0	100	100
	14-38	*Silt loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
Kauder-----	38-95	*Silty clay loam, silt loam	*CL			0	0	85-100	84-100
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy silt loam	*ML, MH			0	0	100	95-100
	4-15	*Ashy silt loam	*ML, MH			0	0	100	95-100
	15-23	*Silt loam	*ML			0	0	100	95-100
	23-34	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
96: Grangemont, dry	34-95	*Silty clay loam, silt loam, clay loam	*CL			0	0	100	95-100
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-7	*Ashy silt loam	*ML, OH			0	0	100	100
	7-14	*Ashy silt loam, ashy loam	*ML			0	0	100	100
	14-38	*Silt loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
	38-95	*Silty clay loam, silt loam	*CL			0	0	85-100	84-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
96: Kauder, dry-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-4	*Ashy silt loam	*ML, MH			0	0	100	95-100
	4-15	*Ashy silt loam	*ML, MH			0	0	100	95-100
	15-23	*Silt loam	*ML			0	0	100	95-100
	23-34	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
	34-95	*Silty clay loam, silt loam, clay loam	*CL			0	0	100	95-100
97: Grangemont-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-3	*Moderately decomposed plant material	*PT			0	0	100	60-100
	3-7	*Ashy silt loam	*ML, OH			0	0	100	90-100
	7-14	*Ashy silt loam, ashy loam	*ML			0	0	100	90-100
	14-38	*Silt loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
	38-95	*Silty clay loam, silt loam	*CL			0	0	85-100	184-100
									71-100
Kauder, moist----	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-4	*Ashy silt loam	*ML, MH			0	0	100	95-100
	4-15	*Ashy silt loam	*ML, MH			0	0	100	95-100
	15-23	*Silt loam	*ML			0	0	100	95-100
	23-34	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
	34-95	*Silty clay loam, silt loam, clay loam	*CL			0	0	100	95-100
98: Grangemont, wet	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-3	*Moderately decomposed plant material	*PT			0	0	100	60-100
	3-7	*Ashy silt loam	*ML, OH			0	0	100	90-100
	7-14	*Ashy silt loam, ashy loam	*ML			0	0	100	90-100
	14-38	*Silt loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
	38-95	*Silty clay loam, silt loam	*CL			0	0	85-100	184-100
									71-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	4		
							10	10	40
98: Riswold-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Ashy silt loam	*ML			0	0	95-100	90-100
	9-17	*Ashy silt loam, ashy loam	*ML			0	0	90-100	85-100
	17-27	*Silt loam, gravelly silt loam	*CL			0	0	80-100	75-100
	27-44	*Silt loam, gravelly silt loam, silty clay loam	*CL			0	0-8	75-100	70-100
	44-60	*Cobbly silty clay loam	*CL, GC			0	3-21	54-87	50-87
99: Grasshopper-----	60-72	*Very cobbly silty clay loam	*CL, GC			0	5-51	37-68	32-67
	0-16	*Ashy loam	*CL, CL-ML			0	0	100	100
	16-22	*Clay loam, loam, silt loam	*CL			0	0	100	100
	22-40	*Sandy loam, silt loam, loam	*SC			0	0	100	100
	40-53	*Loam, silt loam, silty clay loam, clay loam	*CL			0	0	100	100
	53-58	*Extremely gravelly sandy clay loam	*GC, GP-GC			0	0	18-28	15-25
	58-64	*Loam, very gravelly sandy clay loam, very gravelly loamy coarse sand	*SC-SM, SM, CL			0	0	84-100	84-100
100: Gwin-----	0-4	*Cobbly silt loam	*CL, GC			0-4	9-47	49-80	47-79
	4-8	*Very gravelly silt loam	*GC, CL			0	0-26	38-87	35-86
	8-13	*Very gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*GC, CL			0-9	17-70	22-77	20-76
	13-23	*Unweathered bedrock				---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-					
			Unified	AASHTO	>10 inches	3-10 inches	4			10	40	
100: Kettenbach-----	In					Pct	Pct					
	0-3	*Gravelly silt loam	*CL, GM, GC-GM	*A-6, A-4	0-10	0-10	55-85	50-75	45-70			
	3-11	*Very gravelly silt loam, very gravelly silty clay loam, gravelly silt loam	*GC, CL	*A-6, A-2	0	0-15	45-80	40-70	35-65			
	11-36	*Very cobbly silty clay loam, very gravelly silt loam, extremely cobbly silty clay loam	*GC, MH, CL	*A-2, A-7, A-6	0	6-55	35-65	30-60	25-60			
	36-46	*Unweathered bedrock			---	---	---	---	---			
101: Gwin-----	0-4	*Cobbly silt loam	*CL, GC	*A-4, A-2, A-6	0-4	9-47	49-80	47-79	43-79			
	4-8	*Very gravelly silt loam	*GC, CL	*A-2, A-7	0	0-26	38-87	35-86	32-84			
	8-13	*Very gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*GC, CL	*A-6, A-7, A-2	0-9	17-70	22-77	20-76	20-76			
	13-23	*Unweathered bedrock			---	---	---	---	---			
	0-3	*Gravelly silt loam	*CL, GM, GC-GM	*A-6, A-4	0-10	0-10	55-85	50-75	45-70			
Kettenbach-----	3-11	*Very gravelly silt loam, very gravelly silty clay loam, gravelly silt loam	*GC, CL	*A-6, A-2	0	0-15	45-80	40-70	35-65			
	11-36	*Very cobbly silty clay loam, very gravelly silt loam, extremely cobbly silty clay loam	*GC, MH, CL	*A-2, A-7, A-6	0	6-55	35-65	30-60	25-60			
	36-46	*Unweathered bedrock			---	---	---	---	---			

Table 26.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
101: Keuterville-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-11	*Gravelly silt loam	*CL, GC	*A-4, A-6	0	0-25	55-95	50-90	45-85
	11-21	*Very gravelly silt loam, silt loam, very cobbly silt loam	*GC, CL	*A-2, A-6, A-4	0	0-30	40-95	35-90	30-85
	21-52	*Very gravelly silty clay loam, very cobbly clay loam, extremely gravelly silt loam	*GC	*A-2, A-7, A-6	0-10	0-50	35-65	30-60	25-55
	52-64	*Extremely gravelly silty clay loam, very gravelly loam, very stony silty clay loam	*GC	*A-2, A-7, A-6	0-55	10-65	30-60	25-55	20-50
102: Hildebrand-----	0-4	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	95-100	85-10
	4-12	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	95-100	85-10
	12-40	*Loam, silt loam, silty clay loam	*CL, CL-ML	*A-4, A-6, A-7	0	0	95-100	90-100	65-95
	40-60	*Silt loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML	*A-4	0	0	68-100	67-100	52-93
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
Spacecreek, dry	2-10	*Medial silt loam	*ML, OH	*A-5, A-4	0	0	100	100	85-95
	10-16	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	100	100	85-95
	16-28	*Loam, silty clay loam, coarse sandy loam	*CL, SC, SC-SM, GC	*A-4, A-6	0	0-30	80-100	80-100	55-95
	28-42	*Sandy loam, silt loam	*SC, GC, CL, SC-SM	*A-4, A-6	0	0	70-100	65-100	50-90
	42-64	*Silt loam, loamy sand, loam	*CL-ML, ML, CL, SM, SC-SM	*A-4, A-2, A-6	0	0-50	75-100	75-100	60-85



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
103: Hubub, wet-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	95-100	90-100	80-100
	5-17	*Ashy silt loam, ashy loam	*ML, MH	*A-5, A-4	0	0	95-100	90-100	80-100
	17-19	*Silt loam, loam, gravelly loam	*CL, CL-ML	*A-4, A-6	0	0-8	77-100	76-100	71-100
	19-42	*Silt loam, gravelly silty clay loam, gravelly sandy clay loam	*CL	*A-6, A-4	0	0-8	65-100	64-100	60-100
	42-62	*Very cobbly loam, extremely cobbly sandy loam, very gravelly loam, very cobbly sandy clay loam	*GC, CL	*A-6, A-4, A-2	0-4	22-41	32-68	29-66	26-66
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	100
104: Hubub, wet-----	2-5	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	95-100	90-100	80-100
	5-17	*Ashy silt loam, ashy loam	*ML, MH	*A-5, A-4	0	0	95-100	90-100	80-100
	17-19	*Silt loam, loam, gravelly loam	*CL, CL-ML	*A-4, A-6	0	0-8	77-100	76-100	71-100
	19-42	*Silt loam, gravelly silty clay loam, gravelly sandy clay loam	*CL	*A-6, A-4	0	0-8	65-100	64-100	60-100
	42-62	*Very cobbly loam, extremely cobbly sandy loam, very gravelly loam, very cobbly sandy clay loam	*GC, CL	*A-6, A-4, A-2	0-4	22-41	32-68	29-66	26-66

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
104: Dworshak-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	2-3	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	3-11	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	90-10
	11-18	*Ashy silt loam, ashy loam	*ML, MH	*A-5, A-4	0	0	100	100	90-10
	18-31	*Silt loam, gravelly clay loam	*CL	*A-6, A-4	0	0	68-100	67-100	65-10
	31-63	*Very gravelly clay loam, gravelly clay loam	*GC, CL	*A-6, A-7, A-2	0	9-39	45-74	43-73	37-73
105: Hubub-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-5	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	95-100	90-100	80-10
	5-17	*Ashy silt loam, ashy loam	*ML, MH	*A-5, A-4	0	0	95-100	90-100	80-10
	17-19	*Silt loam, loam, gravelly loam	*CL, CL-ML	*A-4, A-6	0	0-8	77-100	76-100	71-10
	19-42	*Silt loam, gravelly silty clay loam, gravelly sandy clay loam	*CL	*A-6, A-4	0	0-8	65-100	64-100	60-10
	42-62	*Very cobbly loam, extremely cobbly sandy loam, very gravelly loam, very cobbly sandy clay loam	*GC, CL	*A-6, A-4, A-2	0-4	22-41	32-68	29-66	26-66

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
105: Lostpete-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Medial silt loam	*ML, MH			0	0	100	100
	5-13	*Medial silt loam	*ML			0	0	100	100
	13-19	*Medial silt loam, medial loam	*ML			0	0	100	95-100
	19-29	*Silt loam, loam	*CL, CL-ML			0	0	100	95-100
	29-42	*Silt loam, loam	*CL, CL-ML			0	0	100	90-100
	42-52	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	90-100
	52-66	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	95-100	85-100
106: Huchberit-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-6	*Medial silt loam	*ML, MH			0	0	100	100
	6-14	*Medial silt loam, medial loam	*ML, MH			0	0	100	100
	14-21	*Medial silt loam, medial loam	*ML			0	0	95-100	90-95
	21-28	*Gravelly loam, loam	*SC-SM, CL GC-GM, CL			0	0-10	70-100	65-100
	28-36	*Gravelly sandy loam, gravelly coarse sandy loam, sandy loam,	*SC, CL, SC-SM			0	0	70-100	65-100
	36-48	*Gravelly sandy loam, gravelly coarse sandy loam, very gravelly sandy loam	*SC-SM, SC, GM, SM			0	0	60-85	55-75
	48-62	*Loamy coarse sand, very gravelly sandy loam, sandy loam	*SC-SM, SM			0	0	65-90	55-85

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
107: Huchberit-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-6	*Medial silt loam	*ML, MH			0	0	100	100
	6-14	*Medial silt loam, medial loam	*ML, MH			0	0	100	100
	14-21	*Medial silt loam, medial loam	*ML			0	0	95-100	90-95
	21-28	*Gravelly loam, loam	*SC-SM, CL			0	0-10	70-100	65-100
	28-36	*Gravelly sandy loam, gravelly coarse sandy loam, sandy loam,	*SC, CL, SC-SM			0	0	70-100	65-100
	36-48	*Gravelly sandy loam, gravelly coarse sandy loam, very gravelly sandy loam	*SC-SM, SC, GM, SM			0	0	60-85	55-75
	48-62	*Loamy coarse sand, very gravelly sandy loam, sandy loam	*SC-SM, SM			0	0	65-90	55-85

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
107: Vaywood, high precipitation--	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-100
	1-2	*Moderately decomposed plant material	*PT	*A-8		0	0	100	60-100
	2-7	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	0	90-100	85-100
	7-15	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	0	80-100	75-90
	15-20	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	0	80-100	75-90
	20-25	*Very cobbly loam, cobbly sandy loam, extremely gravelly loam	*SC-SM, GC-GM, GC	*A-2, A-4, A-1	0	0-49	0	55-85	25-70
	25-38	*Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly loamy sand, very gravelly loam	*GC-GM, GW-GC, SC-SM, SC	*A-1, A-2	0	0-50	0	40-85	30-50
108: Hugus-----	38-47	*Gravelly sandy loam, extremely gravelly loamy sand, cobbly sandy loam	*SM, GP-GM, GW-GM, SC-SM	*A-2, A-4, A-1	0	15-60	0	50-85	25-70
	47-62	*Gravelly sandy loam, extremely gravelly loamy sand, extremely cobbly loamy sand	*SM, SC-SM, GW-GM	*A-2, A-1	0	0-60	0	50-90	30-75
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	0	100	100
	1-3	*Moderately decomposed plant material	*PT	*A-8	0	0	0	100	100
	3-7	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	0	94-100	93-100
	7-19	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0-15	0	73-100	72-100
	19-32	*Very gravelly loam, very cobbly loam, gravelly sandy loam	*GC, CL, GC-GM	*A-2, A-4, A-6	0-8	8-53	0	39-73	37-72
	32-51	*Very gravelly sandy loam, very cobbly loam	*GC, GC-GM	*A-2, A-1	0-8	8-53	0	36-73	34-72
	51-60	*Very gravelly sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	*GC-GM, GC, GP, GM	*A-1, A-2	0	0-42	0	20-62	15-60

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	4	10	40
109: Hugus-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-7	*Ashy silt loam	*ML, OH			0	0	94-100	93-100
	7-19	*Ashy silt loam	*ML, MH			0	0-15	73-100	72-100
	19-32	*Very gravelly loam, very cobbly loam, gravelly sandy loam	*GC, CL, GC-GM			0-8	8-53	39-73	37-72
	32-51	*Very gravelly sandy loam, very cobbly loam	*GC, GC-GM			0-8	8-53	36-73	34-72
	51-60	*Very gravelly sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	*GC-GM, GC, GP, GM			0	0-42	20-62	15-60
110: Hugus, moist----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-7	*Ashy silt loam	*ML, OH			0	0	94-100	93-100
	7-19	*Ashy silt loam	*ML, MH			0	0-15	73-100	72-100
	19-32	*Very gravelly loam, very cobbly loam, gravelly sandy loam	*GC, CL, GC-GM			0-8	8-53	39-73	37-72
	32-51	*Very gravelly sandy loam, very cobbly loam	*GC, GC-GM			0-8	8-53	36-73	34-72
	51-60	*Very gravelly sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	*GC-GM, GC, GP, GM			0	0-42	20-62	15-60

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
111: Hugus, high precipitation--	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-3	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	3-7	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	94-100	93-100	92-10
	7-19	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0-15	73-100	72-100	70-10
	19-32	*Very gravelly loam, very cobbly loam, gravelly sandy loam	*GC, CL, GC-GM	*A-2, A-4, A-6	0-8	8-53	39-73	37-72	36-72
	32-51	*Very gravelly sandy loam, very cobbly loam	*GC, GC-GM	*A-2, A-1	0-8	8-53	36-73	34-72	25-59
	51-60	*Very gravelly sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	*GC-GM, GC, GP, GM	*A-1, A-2	0	0-42	20-62	15-60	15-49
112: Hugus, moist----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-3	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	3-7	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	94-100	93-100	92-10
	7-19	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0-15	73-100	72-100	70-10
	19-32	*Very gravelly loam, very cobbly loam, gravelly sandy loam	*GC, CL, GC-GM	*A-2, A-4, A-6	0-8	8-53	39-73	37-72	36-72
	32-51	*Very gravelly sandy loam, very cobbly loam	*GC, GC-GM	*A-2, A-1	0-8	8-53	36-73	34-72	25-59
	51-60	*Very gravelly sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	*GC-GM, GP, GC, GM	*A-1, A-2	0	0-42	20-62	15-60	15-49

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct inches	3-10		
							4	10	40
112: Hugus-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Moderately decomposed plant material	*PT			0	0	100	100
	3-7	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	94-100	93-100	92-100
	7-19	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0-15	73-100	72-100	70-100
	19-32	*Very gravelly loam, very cobbly loam, gravelly sandy loam	*GC, CL, GC-GM	*A-2, A-4, A-6	0-8	8-53	39-73	37-72	36-72
	32-51	*Very gravelly sandy loam, very cobbly loam	*GC, GC-GM	*A-2, A-1	0-8	8-53	36-73	34-72	25-59
	51-60	*Very gravelly sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	*GC-GM, GC, GP, GM	*A-1, A-2	0	0-42	20-62	15-60	15-49
113: Hugus-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
	3-7	*Ashy silt loam	*ML, OH	*A-5, A-4	0	0	94-100	93-100	92-100
	7-19	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0-15	73-100	72-100	70-100
	19-32	*Very gravelly loam, very cobbly loam, gravelly sandy loam	*GC, CL, GC-GM	*A-2, A-4, A-6	0-8	8-53	39-73	37-72	36-72
	32-51	*Very gravelly sandy loam, very cobbly loam	*GC, GC-GM	*A-2, A-1	0-8	8-53	36-73	34-72	25-59
	51-60	*Very gravelly sandy loam, extremely gravelly loamy sand, very cobbly loamy sand	*GC-GM, GP, GC, GM	*A-1, A-2	0	0-42	20-62	15-60	15-49
Dworshak-----	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	2-3	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
	3-11	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	90-100
	11-18	*Ashy silt loam, ashy loam	*ML, MH	*A-5, A-4	0	0	100	100	90-100
	18-31	*Silt loam, gravelly clay loam	*CL	*A-6, A-4	0	0	68-100	67-100	65-100
	31-63	*Very gravelly clay loam, gravelly clay loam	*GC, CL	*A-6, A-7, A-2	0	9-39	45-74	43-73	37-73



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
114: Itzee-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-4	*Sandy loam							
			*SC-SM, SC, SM	*A-2, A-4, A-6		0	0	90-100	85-100
	4-12	*Fine sandy loam, loamy fine sand, coarse	*SM, SC, SC-SM	*A-2, A-6, A-1, A-4		0	0	90-100	85-100
	12-47	*Loamy fine sand, fine sandy loam	*SC-SM, SM, SC	*A-2		0	0-1	79-100	78-100
115: Jacket-----									
	0-2	*Moderately decomposed plant material	*PT			0	0	100	60-100
	2-16	*Silt loam							
	16-33	*Silty clay loam, silty clay	*ML, CL-ML *CH, CL	*A-7, A-4 *A-7		0	0	95-100	90-100
	33-64	*Silty clay, silty clay loam, gravelly silty clay loam	*CH, CL	*A-7		0	0-10	80-100	75-100
116: Jacket-----	0-7	*Silt loam	*CL, ML, CL-ML	*A-4		0	0	100	94-100
	7-27	*Silty clay loam							
	27-56	*Silty clay loam, silty clay	*CL, CH *CH, CL	*A-7, A-6 *A-7		0	0	100	96-100
	56-63	*Silty clay, silty clay loam, gravelly silty clay loam	*CH, CL	*A-7		0	0-4	79-100	75-100
117: Jacket-----	0-2	*Moderately decomposed plant material	*PT			0	0	100	60-100
	2-16	*Silt loam							
	16-33	*Silty clay loam, silty clay	*ML, CL-ML *CH, CL	*A-7, A-4 *A-7		0	0	95-100	90-100
	33-64	*Silty clay, silty clay loam, gravelly silty clay loam	*CH, CL	*A-7		0	0-10	80-100	75-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
117: Wellsbench-----	In				Pct	Pct			
	0-6	*Silt loam	*CL	*A-6	0	0	0	90-100	185-100
	6-14	*Gravelly silty clay loam, very gravelly clay loam	*CH, GC, CL	*A-7, A-2, A-6	0	0-40	0	45-80	45-75
	14-41	*Very cobbly silty clay loam, extremely cobbly clay, very gravelly silty clay	*GC	*A-7, A-2	0	0-75	0	30-60	30-55
	41-51	*Unweathered bedrock			---	---	---	---	---
118: Jacot-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	0	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	0	100	100
	2-6	*Ashy silt loam	*ML	*A-5, A-4	0	0	0	65-100	63-100
	6-16	*Ashy silt loam, gravelly ashy silt loam	*ML, GM, SM	*A-5, A-4	0	0	0	55-100	53-100
	16-42	*Gravelly sandy loam, gravelly loam, sandy loam	*SC-SM, SM, CL, GM, ML	*A-2, A-6, A-1, A-4	0	0-10	0	65-90	55-80
	42-50	*Gravelly loamy sand, gravelly loamy coarse sand, gravelly coarse sand	*SM, SC-SM, SP-SM	*A-1	0	0-10	0	60-70	50-60
	50-62	*Very gravelly loamy sand, very gravelly coarse sand	*GW-GM, GP-GM, GC-GM, GM, SM	*A-1	0	0-10	0	40-60	30-50
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	0	100	100
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	0	100	100
	2-4	*Ashy silt loam	*ML	*A-5, A-4	0	0	0	73-100	72-100
Garveson-----	4-18	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0	0	0	73-100	72-100
	18-25	*Very gravelly loamy coarse sand, gravelly loamy sand	*SM, SW-SM, GP-GM	*A-1	0	0-48	0	21-92	18-91
	25-62	*Very gravelly coarse sand, very gravelly loamy coarse sand	*SP-SM, SP, SW-SM	*A-1	0-26	7-15	0	11-69	7-68

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
119: Jacot-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-2	*Moderately decomposed plant material	*PT				0	100	60-100
	2-6	*Ashy silt loam	*ML				0	65-100	61-100
	6-16	*Ashy silt loam	*ML, GM, SM			0	0	55-100	51-100
	16-42	*Gravelly ash silt loam *Gravelly sandy loam, gravelly loam, sandy loam	*SC-SM, SM, CL, GM, ML			0	0-10	65-90	35-65
	42-50	*Gravelly loamy sand, gravelly loamy coarse sand, gravelly coarse sand	*SM, SC-SM, SP-SM			0	0-10	60-70	24-45
	50-62	*Very gravelly loamy sand, very gravelly coarse sand	*GW-GM, GC-GM, SM, GM, GP-GM			0	0-10	40-60	30-50
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	60-100
Garveson-----	2-4	*Ashy silt loam	*ML			0	0	73-100	63-94
	4-18	*Ashy silt loam, ashy loam	*ML			0	0	73-100	62-94
	18-25	*Very gravelly loamy coarse sand, gravelly loamy sand	*SM, SW-SM, GP-GM			0	0-48	21-92	10-56
	25-62	*Very gravelly coarse sand, very gravelly loamy coarse sand	*SP-SM, SP, SW-SM			0-26	7-15	11-69	3-33

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
120: Jaype-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam	*ML			0	0	100	100
	5-14	*Ashy silt loam, ashy loam	*ML			0	0-1	86-100	85-100
	14-26	*Loam, clay loam, gravelly sandy loam	*CL, SC-SM, SC			0	0-9	75-100	74-100
	26-72	*Silty clay loam, loam, silty clay	*CL			0	0-5	83-100	83-100
	72-82	*Sandy loam, silty clay loam, coarse sand, loam, clay, silty clay	*SM, SC-SM, CH, MH, ML			0	0-5	77-100	76-100
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML			0	0	100	95-100
Revling-----	7-21	*Ashy silt loam, ashy loam	*ML			0	0	95-100	90-100
	21-35	*Sandy clay loam, loam, gravelly clay loam, cobbly silt loam	*CL, SC-SM, GC-GM, CL-ML, SC			0	0-15	60-100	55-100
	35-86	*Sandy clay loam, gravelly sandy loam, loam, silty clay loam	*CL, SC-SM, GC-GM, CL-ML, SC			0	0-15	60-100	55-100
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam	*ML			0	0	100	100
	5-14	*Ashy silt loam, ashy loam	*ML			0	0-1	86-100	85-100
	14-26	*Loam, clay loam, gravelly sandy loam	*CL, SC-SM, SC			0	0-9	75-100	74-100
	26-72	*Silty clay loam, loam, silty clay	*CL			0	0-5	83-100	83-100
	72-82	*Sandy loam, silty clay loam, coarse sand, loam, clay, silty clay	*SM, SC-SM, CH, MH, ML			0	0-5	77-100	76-100
121: Jaype, dry-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam	*ML			0	0	100	100
	5-14	*Ashy silt loam, ashy loam	*ML			0	0-1	86-100	85-100
	14-26	*Loam, clay loam, gravelly sandy loam	*CL, SC-SM, SC			0	0-9	75-100	74-100
	26-72	*Silty clay loam, loam, silty clay	*CL			0	0-5	83-100	83-100
	72-82	*Sandy loam, silty clay loam, coarse sand, loam, clay, silty clay	*SM, SC-SM, CH, MH, ML			0	0-5	77-100	76-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
121: Reving, dry----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-7	*Ashy silt loam	*ML			0	0	100	95-100
	7-21	*Ashy silt loam, ashy loam	*ML			0	0	95-100	90-100
	21-35	*Sandy clay loam, loam, gravelly clay loam, cobbly silt loam	*CL, SC-SM, GC-GM, CL-ML, SC			0	0-15	60-100	55-100
	35-86	*Sandy clay loam, gravelly sandy loam, loam, silty clay loam	*CL, SC-SM, GC-GM, CL-ML, SC			0	0-15	60-100	55-100
122: Jaype-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	60-100
	2-5	*Ashy silt loam	*ML			0	0	100	88-93
	5-14	*Ashy silt loam, ashy loam	*ML			0	0-1	86-100	85-100
	14-26	*Loam, clay loam, gravelly sandy loam	*CL, SC-SM, SC			0	0-9	75-100	74-100
	26-72	*Silty clay loam, loam, silty clay	*CL			0	0-5	83-100	83-100
	72-82	*Sandy loam, silty clay loam, coarse sand, loam, clay, silty clay	*SM, SC-SM, CH, MH, ML			0	0-5	77-100	76-100
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-2	*Ashy silt loam	*CL-ML, ML			0	0	100	90-100
	2-9	*Ashy silt loam, ashy loam	*CL			0	0	100	90-100
	9-51	*Silt loam, silty clay loam, paragravelly silt loam	*CL			0	0	100	85-100
	51-61	*Silty clay loam, silt loam, paragravelly silty clay loam	*CL, CH			0	0	100	85-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	4		
							10	10	40
123: Joel-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-16	*Silt loam	*ML, CL			0	0	100	95-100
	16-27	*Silt loam	*ML, CL			0	0	100	95-100
	27-40	*Silty clay loam, silt loam	*CL			0	0	95-100	95-100
	40-61	*Silty clay loam, silt loam	*ML, MH, CL			0	0	100	95-100
Setters-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-15	*Silt loam	*CL, ML			0	0	95-100	85-100
	15-28	*Silt loam	*CL, CL-ML			0	0	95-100	90-100
	28-34	*Silt loam, silt	*CL, CL-ML			0	0	95-100	90-100
	34-62	*Silty clay, silty clay loam, cobbly clay loam	*CH		0-15	0-35	80-100	70-100	70-100
124: Johnson-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-12	*Loam	*CL, SC-SM, CL-ML			0	0	75-100	74-100
	12-22	*Loam, clay loam, cobbly clay loam	*CL, GC, CH, CL-ML			0	0-25	65-100	65-100
	22-54	*Clay loam, gravelly clay loam, cobbly clay loam	*CL, CH, GC-GM, CL-ML			0	0-25	65-100	65-100
	54-64	*Weathered bedrock			---	---	---	---	---
125: Johnson-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-12	*Loam	*CL, SC-SM, CL-ML			0	0	75-100	74-100
	12-22	*Loam, clay loam, cobbly clay loam	*CL, GC, CH, CL-ML			0	0-25	65-100	65-100
	22-54	*Clay loam, gravelly clay loam, cobbly clay loam	*CL, CH, GC-GM, CL-ML			0	0-25	65-100	65-100
	54-64	*Weathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
125: Swayne-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-8	*Silt loam	*CL			0	0	100	90-100
	8-14	*Silty clay loam, silt loam, loam	*CL *CL	A-6, A-4 A-7, A-6		0	0	100	90-100
	14-22	*Silty clay loam, silt loam, loam	*CL, CH	A-6		0	0	100	90-100
	22-56	*Silty clay loam, silty clay, clay loam	*CH, CL	A-6		0	0	95-100	85-100
	56-61	*Clay loam, silty clay loam, clay	*CH	A-7		0	0	95-100	85-100
126: Johnson-----	0-2	*Slightly decomposed plant material	*PT	A-8		0	0	100	100
	2-12	*Loam	*CL, SC-SM, CL-ML	A-4, A-6		0	0	75-100	74-100
	12-22	*Loam, clay loam, cobbly clay loam	*CL, GC, CH, CL-ML	A-6, A-7, A-4		0	0-25	65-100	65-100
	22-54	*Clay loam, gravelly clay loam, cobbly clay loam	*CL, CH, GC-GM, CL-ML	A-6, A-7, A-4		0	0-25	65-100	65-100
	54-64	*Weathered bedrock			---	---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	A-8		0	0	100	100
	1-8	*Silt loam	*CL	A-6, A-4		0	0	100	90-100
	8-14	*Silty clay loam, silt loam, loam	*CL	A-7, A-6		0	0	100	90-100
Swayne-----	14-22	*Silty clay loam, silt loam, loam	*CL, CH	A-7, A-6		0	0	100	90-100
	22-56	*Silty clay loam, silty clay, clay loam	*CH, CL	A-7, A-6		0	0	95-100	85-100
	56-61	*Clay loam, silty clay loam, clay	*CH	A-7		0	0	95-100	85-100

Table 26.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
127: Johnson-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-12	*Loam	*CL, SC-SM, CL-ML	*A-8 *A-4, A-6		0	0	75-100	74-100
	12-22	*Loam, clay loam, cobbly clay loam	*CL, GC, CH, CL-ML	*A-6, A-7, A-4		0	0-25	65-100	65-100
	22-54	*Clay loam, gravelly clay loam, cobbly clay loam	*CL, CH, GC-GM, CL-ML	*A-6, A-7, A-4		0	0-25	65-100	65-100
	54-64	*Weathered bedrock			---	---	---	---	---
Texas creek-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-100
	1-13	*Loam	*CL-ML, CL	*A-4		0	0	100	90-100
	13-25	*Gravelly loam, gravelly coarse sandy loam, loamy sand	*SC-SM, SC, SM	*A-4, A-1, A-2		0	0-15	80-100	60-90
	25-33	*Gravelly sandy loam, very gravelly loamy sand	*SC-SM, SC, SP-SM, SW-SC, SM	*A-1, A-2		0	0-20	60-90	40-75
	33-43	*Weathered bedrock			---	---	---	---	---
128: Jury-----	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-100
	2-6	*Medial silt loam	*ML, MH	*A-5, A-4		0	0	100	95-100
	6-29	*Medial silt loam, gravelly medial silt loam, gravelly medial loam	*ML, SM, MH	*A-5, A-4		0	0	85-100	70-100
	29-48	*Sandy loam, gravelly loam, cobbly coarse sandy loam	*SC-SM, CL, SM	*A-2, A-6, A-1, A-4		0	0-15	65-100	55-95
	48-62	*Loamy sand, cobbly sandy loam, very gravelly loamy coarse sand	*SC-SM, SP-SM, SC, SM	*A-2, A-1		0-10	0-5	60-85	60-80



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
129: Jury-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-6	*Medial silt loam	*ML, MH	*A-5, A-4		0	0	100	95-100
	6-29	*Medial silt loam, gravelly medial silt loam, gravelly medial loam	*ML, SM, MH	*A-5, A-4		0	0	85-100	70-100
	29-48	*Sandy loam, gravelly loam, cobbly coarse sandy loam	*SC-SM, CL, SM	*A-2, A-6, A-1, A-4		0	0-15	65-100	55-95
	48-62	*Loamy sand, cobbly sandy loam, very gravelly loamy coarse sand	*SC-SM, SP-SM, SC, SM	*A-2, A-1		0-10	0-5	60-85	60-80
130: Jury, cold-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	60-100
	2-6	*Medial silt loam	*ML, MH	*A-5, A-4		0	0	100	95-100
	6-29	*Medial silt loam, gravelly medial silt loam, gravelly medial loam	*ML, SM, MH	*A-5, A-4		0	0	85-100	70-100
	29-48	*Sandy loam, gravelly loam, cobbly coarse sandy loam	*SC-SM, CL, SM	*A-2, A-6, A-1, A-4		0	0-15	65-100	55-95
	48-62	*Loamy sand, cobbly sandy loam, very gravelly loamy coarse sand	*SC-SM, SP-SM, SC, SM	*A-2, A-1		0-10	0-5	60-85	60-80

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
131: Jury-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-6	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	100	95-100	90-95
	6-29	*Medial silt loam, gravelly medial silt loam, gravelly medial loam	*ML, SM, MH	*A-5, A-4	0	0	85-100	70-100	60-95
	29-48	*Sandy loam, gravelly loam, cobbly coarse sandy loam	*SC-SM, Cl, SM	*A-2, A-6, A-1, A-4	0	0-15	65-100	55-95	40-85
	48-62	*Loamy sand, cobbly sandy loam, very gravelly loamy coarse sand	*SC-SM, SP-SM, SC, SM	*A-2, A-1	0-10	0-5	60-85	60-80	45-80
	0-14	*Medial loam	*OL, OH, ML	*A-5, A-4	0	0-5	95-100	85-100	75-90
	14-22	*Medial loam, gravelly medial loam	*ML, OH, SM	*A-5, A-4	0	0-10	85-100	70-90	60-80
	22-37	*Gravelly loam, loam, very gravelly coarse sandy loam	*GC, ML, GC-GM	*A-4, A-1	0	0-15	50-85	50-85	35-70
	37-43	*Gravelly loamy sand	*SM, SC-SM, GM	*A-2, A-1	0	0-8	57-100	55-100	43-85
132: Jury-----	43-60	*Very gravelly loam, loamy coarse sand, gravelly loamy sand	*GC-GM, GC, GM	*A-2, A-4, A-1	0	0-25	50-85	45-85	40-75
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-6	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	100	95-100	90-95
	6-29	*Medial silt loam, gravelly medial silt loam, gravelly medial loam	*ML, SM, MH	*A-5, A-4	0	0	85-100	70-100	60-95
	29-48	*Sandy loam, gravelly loam, cobbly coarse sandy loam	*SC-SM, Cl, SM	*A-2, A-6, A-1, A-4	0	0-15	65-100	55-95	40-85
	48-62	*Loamy sand, cobbly sandy loam, very gravelly loamy coarse sand	*SC-SM, SP-SM, SC, SM	*A-2, A-1	0-10	0-5	60-85	60-80	45-80

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4		
							10	40	
132: Weitas-----	In				Pct	Pct			
	0-14	*Medial loam	*OL, OH, ML	*A-5, A-4	0	0-5	95-100	85-100	75-90
	14-22	*Medial loam, gravelly medial loam	*ML, OH, SM	*A-5, A-4	0	0-10	85-100	70-90	60-80
	22-37	*Gravelly loam, loam, very gravelly coarse sandy loam	*GC, ML, GC-GM	*A-4, A-1	0	0-15	50-85	50-85	35-70
	37-43	*Gravelly loamy sand	*SM, SC-SM, GM	*A-2, A-1	0	0-8	57-100	55-100	43-85
	43-60	*Very gravelly loam, loamy coarse sand, gravelly loamy sand	*GC-GM, GC, GM	*A-2, A-4, A-1	0	0-25	50-85	45-85	40-75
133: Kauder-----	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	95-100	90-10
	4-15	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	95-100	90-10
	15-23	*Silt loam	*ML	*A-4	0	0	100	95-100	90-10
	23-34	*Silt loam, loam, silty clay loam	*CL, CL-ML	*A-4, A-6	0	0	100	95-100	90-10
	34-95	*Silty clay loam, silt loam, clay loam	*CL	*A-6, A-4	0	0	100	95-100	90-10
134: Keeler, dry-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-5	*Ashy loam	*ML	*A-4	0	0	100	95-100	85-90
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL	*A-4	0	0	100	95-100	85-90
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM	*A-4, A-6	0	0-10	85-100	70-100	65-85
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam,	*SC, SC-SM, GC, CL	*A-2, A-1, A-6	0-9	0-6	70-100	65-100	50-90
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM	*A-2, A-1, A-4	0	2-7	60-80	55-80	40-70

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
134: Keeler-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-5	*Ashy loam	*ML			0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL			0	0	100	95-100
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM			0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam,	*SC, GC, CL			0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, GM			0	2-7	60-80	55-80
135: Keeler, moist----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-5	*Ashy loam	*ML			0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL			0	0	100	95-100
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM			0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam, silty clay loam	*SC, SC-SM, GC, CL			0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM			0	2-7	60-80	55-80

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
135: Keeler-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-5	*Ashy loam	*ML			0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL			0	0	100	95-100
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM			0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam,	*SC, GC, CL			0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, GM			0	2-7	60-80	55-80
136: Keeler-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-5	*Ashy loam	*ML			0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL			0	0	100	95-100
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM			0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam,	*SC, SC-SM, GC, CL			0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM			0	2-7	60-80	55-80

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
136: Aldermand-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy loam	*ML, SM			0	0	90-100	85-100
	7-17	*Ashy loam, ashy silt loam, ashy coarse sandy loam	*ML, SM			0	0-5	95-100	85-100
	17-25	*Sandy loam, loam, gravelly loamy sand	*SC-SM, SM, CL-ML, CL			0	0-24	69-92	67-91
	25-33	*Sandy loam, gravelly loamy coarse sand, loam	*SC-SM, SM, CL			0	0-10	75-100	65-95
	33-44	*Gravelly sandy loam, coarse sand	*SM, SC-SM, GM			0	0-1	59-92	57-92
	44-62	*Very stony loamy sand, very gravelly loamy coarse sand	*SM, SC-SM, SP-SM, GP-GM			30-48	8-30	39-71	36-69
137: Keeler-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*CL, ML, CL-ML			0	0	100	90-100
	7-18	*Ashy silt loam	*CL, CL-ML			0	0	100	90-100
	18-38	*Loam, silt loam, silty clay loam	*CL			0	0	100	85-100
	38-62	*Sandy loam, sandy clay loam, fine gravelly clay loam	*SC, CL			0	0	100	45-90

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
137: Jacot-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-2	*Moderately decomposed plant material	*PT				0	100	60-100
	2-6	*Ashy silt loam	*ML	*A-5, A-4		0	0	65-100	61-100
	6-16	*Ashy silt loam, gravelly ash silt loam	*ML, GM, SM	*A-5, A-4		0	0	55-100	51-100
	16-42	*Gravelly sandy loam, gravelly loam, sandy loam	*SC-SM, SM, CL, GM, ML	*A-2, A-6, A-1, A-4		0	0-10	65-90	35-65
	42-50	*Gravelly loamy sand, gravelly loamy coarse sand, gravelly coarse sand	*SM, SC-SM, SP-SM	*A-1		0	0-10	60-70	24-45
	50-62	*Very gravelly loamy sand, very gravelly coarse sand	*GW-GM, GC-GM, SM, GM, GP-GM	*A-1		0	0-10	40-60	15-30
138: Keeler-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-100
	1-5	*Ashy loam	*ML	*A-4		0	0	100	95-100
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL	*A-4		0	0	100	95-100
	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM	*A-4, A-6		0	0-10	85-100	70-100
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam, silty clay loam	*SC, SC-SM, GC, CL	*A-2, A-1, A-6		0-9	0-6	70-100	65-100
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM	*A-2, A-1, A-4		0	2-7	60-80	55-80

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
138: Lado-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-4	*Medial silt loam	*ML, MH			0	0	100	95-100
	4-20	*Medial silt loam	*ML			0	0	100	100
	20-48	*Clay loam, silt loam, gravelly loam	*CL			0	0	90-100	70-100
139: Kettenbach-----	48-64	*Loam, sandy loam, gravelly clay loam	*CL, SC			0	0	90-100	70-100
	0-3	*Gravelly silt loam	*CL, GM, GC-GM			0-10	0-10	55-85	50-75
	3-11	*Very gravelly silt loam, very gravelly silty clay loam, gravelly silt loam	*GC, CL			0	0-15	45-80	40-70
	11-36	*Very cobbly silty clay loam, very gravelly silt loam, extremely cobbly silty clay loam	*GC, MH, CL			0	6-55	35-65	30-60
	36-46	*Unweathered bedrock				---	---	---	---
	0-4	*Cobbly silt loam	*CL, GC			0-4	9-47	49-80	47-79
Gwin-----	4-8	*Very gravelly silt loam	*GC, CL			0	0-26	38-87	35-86
	8-13	*Very gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*GC, CL			0-9	17-70	22-77	20-76
	13-23	*Unweathered bedrock				---	---	---	---
	0-60	*Unweathered bedrock				---	---	---	---



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4		
							10	10	40
140: Kettenbach-----	In				Pct	Pct			
	0-3	*Gravelly silt loam	*CL, GM, GC-GM	*A-6, A-4	0-10	0-10	55-85	50-75	45-70
	3-11	*Very gravelly silt loam, very gravelly silty clay loam, gravelly silt loam	*GC, CL	*A-6, A-2	0	0-15	45-80	40-70	35-65
	11-36	*Very cobbly silty clay loam, very gravelly silt loam, extremely cobbly silty clay loam	*GC, MH, CL	*A-2, A-7, A-6	0	6-55	35-65	30-60	25-60
	36-46	*Unweathered bedrock			---	---	---	---	---
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-11	*Gravelly silt loam	*CL, GC	*A-4, A-6	0	0-25	55-95	50-90	45-85
	11-21	*Very gravelly silt loam, silt loam, very cobbly silt loam	*GC, CL	*A-2, A-6, A-4	0	0-30	40-95	35-90	30-85
	21-52	*Very gravelly silty clay loam, very cobbly clay loam, extremely gravelly silt loam	*GC	*A-2, A-7, A-6	0-10	0-50	35-65	30-60	25-55
	52-64	*Extremely cobbly silty clay loam, very gravelly loam, very stony silty clay loam	*GC	*A-2, A-7, A-6	0-55	10-65	30-60	25-55	20-50
141: Keuterville-----	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-11	*Gravelly silt loam	*CL, GC	*A-4, A-6	0	0-25	55-95	50-90	45-85
	11-21	*Very gravelly silt loam, silt loam, very cobbly silt loam	*GC, CL	*A-2, A-6, A-4	0	0-30	40-95	35-90	30-85
	21-52	*Very gravelly silty clay loam, very cobbly clay loam, extremely gravelly silt loam	*GC	*A-2, A-7, A-6	0-10	0-50	35-65	30-60	25-55
	52-64	*Extremely cobbly silty clay loam, very gravelly loam, very stony silty clay loam	*GC	*A-2, A-7, A-6	0-55	10-65	30-60	25-55	20-50
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	2-11	*Gravelly silt loam	*CL, GC	*A-4, A-6	0	0-25	55-95	50-90	45-85
	11-21	*Very gravelly silt loam, silt loam, very cobbly silt loam	*GC, CL	*A-2, A-6, A-4	0	0-30	40-95	35-90	30-85
	21-52	*Very gravelly silty clay loam, very cobbly clay loam, extremely gravelly silt loam	*GC	*A-2, A-7, A-6	0-10	0-50	35-65	30-60	25-55
	52-64	*Extremely cobbly silty clay loam, very gravelly loam, very stony silty clay loam	*GC	*A-2, A-7, A-6	0-55	10-65	30-60	25-55	20-50

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-			
			Unified	AASHTO	>10 inches	3-10 inches				
							4	10	40	
142: Keuterville-----	In				Pct	Pct				
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100	60-10
	2-11	*Gravelly silt loam	*CL, GC			0	0-25	55-95	50-90	45-85
	11-21	*Very gravelly silt loam, silt loam, very cobbly silt loam	*GC, CL			0	0-30	40-95	35-90	30-85
	21-52	*Very gravelly silty clay loam, very cobbly clay loam, extremely gravelly silt loam	*GC			0-10	0-50	35-65	30-60	25-55
	52-64	*Extremely gravelly silty clay loam, very gravelly loam, very stony silty clay loam	*GC			0-55	10-65	30-60	25-55	20-50
143: Keuterville-----	0-13	*Gravelly silt loam	*SM, SC-SM, ML, CL-ML, GC-GM			0	0-4	67-90	38-90	34-88
	13-49	*Very gravelly silty clay loam, very cobbly clay loam, very gravelly loam	*GC, CL			0	0-32	47-82	29-82	27-82
	49-61	*Very cobbly silty clay loam, very gravelly loam, very gravelly clay loam	*GC, CL, GC-GM, CL-ML			0	9-34	47-84	22-84	20-84
	Rock outcrop----	*Unweathered bedrock				---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
144: Klickson-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-15	*Ashy silt loam							
			*CL-ML, ML, CL	*A-4, A-6	0	0-9	73-100	72-100	63-10
	15-21	*Gravelly silt loam, cobbly loam, silt loam	*CL, GC	*A-6, A-4	0	0-18	65-100	60-100	51-99
	21-35	*Gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*CL, GC	*A-6, A-7, A-2	0-9	0-45	31-67	28-66	26-66
	35-62	*Very gravelly silty clay loam, extremely gravelly clay loam, extremely cobbly loam, very stony silt loam	*GC, CH	*A-2, A-6, A-7	0-16	16-48	31-63	28-61	25-60
145: Klickson-----	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-15	*Ashy silt loam							
			*CL-ML, ML, CL	*A-4, A-6	0	0-9	73-100	72-100	63-10
	15-21	*Gravelly silt loam, cobbly loam, silt loam	*CL, GC	*A-6, A-4	0	0-18	65-100	60-100	51-99
	21-35	*Gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*CL, GC	*A-6, A-7, A-2	0-9	0-45	31-67	28-66	26-66
	35-62	*Very gravelly silty clay loam, extremely gravelly clay loam, extremely cobbly loam, very stony silt loam	*GC, CH	*A-2, A-6, A-7	0-16	16-48	31-63	28-61	25-60

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	4		
							10	10	40
146: Klickson-----	In					Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-15	*Ashy silt loam	*CL-ML, ML, CL	*A-4, A-6		0	0-9	73-100	72-100
	15-21	*Gravelly silt loam, cobbly loam, silt loam	*CL, GC	*A-6, A-4		0	0-18	65-100	60-100
	21-35	*Gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*CL, GC	*A-6, A-7, A-2		0-9	0-45	31-67	28-66
	35-62	*Very gravelly silty clay loam, extremely gravelly clay loam, extremely cobbly loam, very stony silt loam	*GC, CH	*A-2, A-6, A-7		0-16	16-48	31-63	28-61
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-2	*Highly decomposed plant material	*PT	*A-8		0	0	100	100
	2-5	*Ashy silt loam, gravelly ash silt loam	*CL, GC-GM, CL-ML	*A-4, A-2, A-6		0	0-18	53-96	51-96
	5-9	*Gravelly ash silt loam, ash silt loam, very cobbly ash silt loam	*CL, GC	*A-6, A-2		0	0-39	43-75	41-74
Agatha-----	9-20	*Very gravelly silt loam, very cobbly silt loam, very gravelly loam, extremely gravelly silt loam	*GC, CL, GC-GM	*A-6, A-4, A-2		0	17-38	38-71	35-70
	20-60	*Extremely cobbly silty clay loam, extremely cobbly silt loam, very gravelly clay loam	*GC, CH	*A-6, A-7, A-2		0-24	30-59	27-62	24-61
	60-70	*Unweathered bedrock				---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	3-10			
							4	10	40
147: Klickson-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-15	*Ashy silt loam							
			*CL-ML, ML, CL	*A-4, A-6		0	0-9	73-100	72-100
	15-21	*Gravelly silt loam, cobbly loam, silt loam	*CL, GC	*A-6, A-4		0	0-18	65-100	60-100
	21-35	*Gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*CL, GC	*A-6, A-7, A-2		0-9	0-45	31-67	28-66
	35-62	*Very gravelly silty clay loam, extremely gravelly clay loam, extremely cobbly loam, very stony silt loam	*GC, CH	*A-2, A-6, A-7		0-16	16-48	31-63	28-61
Kettenbach-----	0-3	*Gravelly silt loam	*CL, GM, GC-GM	*A-6, A-4		0-10	0-10	55-85	50-75
	3-11	*Very gravelly silt loam, very gravelly silty clay loam, gravelly silt loam	*GC, CL	*A-6, A-2		0	0-15	45-80	40-70
	11-36	*Very cobbly silty clay loam, very gravelly silt loam, extremely cobbly silty clay loam	*GC, MH, CL	*A-2, A-7, A-6		0	6-55	35-65	30-60
	36-46	*Unweathered bedrock				---	---	---	---
	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	2-15	*Ashy silt loam				0	0-9	73-100	72-100
	15-21	*Gravelly silt loam, cobbly loam, silt loam	*CL, GC	*A-6, A-4		0	0-18	65-100	60-100
148: Klickson-----	21-35	*Gravelly silty clay loam, very gravelly loam, extremely cobbly clay loam	*CL, GC	*A-6, A-7, A-2		0-9	0-45	31-67	28-66
	35-62	*Very gravelly silty clay loam, extremely gravelly clay loam, extremely cobbly loam, very stony silt loam	*GC, CH	*A-2, A-6, A-7		0-16	16-48	31-63	28-61

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
148: Rock outcrop----- Kettenbach-----	In				Pct	Pct			
	0-60	*Unweathered bedrock			---	---	---		
	0-3	*Gravelly silt loam	*CL, GM, GC-GM	*A-6, A-4	0-10	0-10	55-85	50-75	45-70
	3-11	*Very gravelly silt loam, very gravelly silty clay loam, gravelly silt loam	*GC, CL	*A-6, A-2	0	0-15	45-80	40-70	35-65
	11-36	*Very cobbly silty clay loam, very gravelly silt loam, extremely cobbly silty clay loam	*GC, MH, CL	*A-2, A-7, A-6	0	6-55	35-65	30-60	25-60
149: Konkol-----	36-46	*Unweathered bedrock			---	---	---		
	0-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-3	*Ashy silt loam	*ML, CL-ML, OL	*A-4, A-5	0	0	100	94-100	86-99
	3-10	*Ashy silt loam, ashy loam	*CL-ML, ML	*A-4, A-6	0	0	100	87-100	79-10
	10-18	*Gravelly loam, silt loam, very fine sandy loam	*SC, SC-SM, CL	*A-6, A-4	0	0	77-100	76-100	60-92
Revling-----	18-25	*Very fine sandy loam	*CL	*A-6, A-4	0	0	100	100	95-10
	25-48	*Silt loam, gravelly sandy clay loam, sandy loam	*CL	*A-6, A-7	0	0	100	100	88-10
	48-56	*Sandy clay loam, very fine sandy loam, gravelly loam	*CL, SC	*A-6, A-7	0	0	100	100	78-93
	56-64	*Very fine sandy loam	*CL	*A-6, A-4	0	0	100	100	95-10
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-7	*Ashy silt loam	*ML	*A-5, A-4	0	0	100	95-100	90-10
	7-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0	0	95-100	90-100	90-10
	21-35	*Sandy clay loam, loam, gravelly clay loam, cobbly silt loam	*CL, SC-SM, GC-GM, CL-ML, SC	*A-4, A-2, A-6	0	0-15	60-100	55-100	50-90
	35-86	*Sandy clay loam, gravelly sandy loam, loam, silty clay loam	*CL, SC-SM, GC-GM, CL-ML, SC	*A-4, A-1, A-7, A-6	0	0-15	60-100	55-100	40-95

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
150: Kooskia-----	In				Pct	Pct			
	0-7	*Silt loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	7-11	*Silt loam, silty clay loam	*CL	*A-6, A-4	0	0	100	100	90-10
	11-20	*Silt loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	20-67	*Silty clay, silty clay loam	*CH, CL	*A-7	0	0-5	95-100	90-100	85-10
151: Kooskia-----	0-7	*Silt loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	7-11	*Silt loam, silty clay loam	*CL	*A-6, A-4	0	0	100	100	90-10
	11-20	*Silt loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	20-67	*Silty clay, silty clay loam	*CH, CL	*A-7	0	0-5	95-100	90-100	85-10
152: Kruse-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-17	*Ashy loam	*CL, ML	*A-6, A-4	0	0	100	100	85-93
	17-50	*Clay loam, sandy clay loam, loam	*CL	*A-7, A-6	0	0	100	95-100	82-96
	50-66	*Coarse sandy loam, sandy loam	*SC, SC-SM, SM	*A-2, A-6, A-4	0	0	95-100	80-100	46-64
153: Kruse-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-6	*Ashy loam	*SC-SM, SM, ML	*A-4	0	0	89-100	89-100	76-97
	6-14	*Ashy loam, ashy silt loam	*CL, ML, CL-ML	*A-4, A-6	0	0	89-100	89-100	73-95
	14-41	*Clay loam, loam, gravelly loam	*CL, GC-GM, CL-ML	*A-6, A-4, A-7	0	0-16	70-100	65-100	55-10
	41-48	*Sandy loam, loam, gravelly loam	*SC, CL	*A-4, A-6, A-2	0	0-8	70-100	65-100	50-84
48-61	*Loamy sand, gravelly sandy loam, loam	*SC-SM, SC, SM	*A-2, A-6, A-1, A-4	0	0-16	65-100	60-100	45-96	

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	inches	3-10			
							4	10	40
154: Kruise-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-6	*Ashy loam	*SC-SM, SM, ML	*A-4	0	0	89-100	89-100	76-97
	6-14	*Ashy loam, ashly silt loam	*CL, ML, CL-ML	*A-4, A-6	0	0	89-100	89-100	73-95
	14-41	*Clay loam, loam, gravelly loam	*CL, GC-GM, CL-ML	*A-6, A-4, A-7	0	0-16	70-100	65-100	55-10
	41-48	*Sandy loam, loam, gravelly loam	*SC, CL	*A-4, A-6, A-2	0	0-8	70-100	65-100	50-84
	48-61	*Loamy sand, gravelly sandy loam, loam	*SC-SM, SC, SM	*A-2, A-6, A-1, A-4	0	0-16	65-100	60-100	45-96
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
Aldermand-----	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-7	*Ashy loam	*ML, SM	*A-4, A-5	0	0	90-100	85-100	65-90
	7-17	*Ashy loam, ashly silt loam, ashly coarse sandy loam	*ML, SM	*A-4, A-2	0	0-5	95-100	85-100	65-90
	17-25	*Sandy loam, loam, gravelly loamy sand	*SC-SM, SM, CL-ML, CL	*A-4, A-2	0	0-24	69-92	67-91	49-77
	25-33	*Sandy loam, gravelly loamy coarse sand, loam	*SC-SM, SM, CL	*A-2-4, A-4	0	0-10	75-100	65-95	45-75
	33-44	*Gravelly sandy loam, coarse sand	*SM, SC-SM, GM	*A-1-b, A-2	0	0-1	59-92	57-92	38-72
	44-62	*Very stony loamy sand, very gravelly loamy coarse sand	*SM, SC-SM, SP-SM, GP-GM	*A-1-b, A-2	30-48	8-30	39-71	36-69	27-55
155: Kruise-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-6	*Ashy loam	*SC-SM, SM, ML	*A-4	0	0	89-100	89-100	76-97
	6-14	*Ashy loam, ashly silt loam	*CL, ML, CL-ML	*A-4, A-6	0	0	89-100	89-100	73-95
	14-41	*Clay loam, loam, gravelly loam	*CL, GC-GM, CL-ML	*A-6, A-4, A-7	0	0-16	70-100	65-100	55-10
	41-48	*Sandy loam, loam, gravelly loam	*SC, CL	*A-4, A-6, A-2	0	0-8	70-100	65-100	50-84
	48-61	*Loamy sand, gravelly sandy loam, loam	*SC-SM, SC, SM	*A-2, A-6, A-1, A-4	0	0-16	65-100	60-100	45-96



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	Pct	4		
							10	10	40
155: Aldermand-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	2-7	*Ashy loam	*ML, SM		0	0	90-100	85-100	65-90
	7-17	*Ashy loam, ashy silt loam, ashy coarse sandy loam	*ML, SM		0	0-5	95-100	85-100	65-90
	17-25	*Sandy loam, loam, gravelly loamy sand	*SC-SM, SM, CL-ML, CL		0	0-24	69-92	67-91	49-77
	25-33	*Sandy loam, gravelly loamy coarse sand, loam	*SC-SM, SM, CL		0	0-10	75-100	65-95	45-75
	33-44	*Gravelly sandy loam, coarse sand	*SM, SC-SM, GM		0	0-1	59-92	57-92	38-72
	44-62	*Very stony loamy sand, very gravelly loamy coarse sand	*SM, SC-SM, SP-SM, GP-GM		30-48	8-30	39-71	36-69	27-55
156: Kruise-----	0-1	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	1-6	*Ashy loam	*SC-SM, SM, ML		0	0	89-100	89-100	76-97
	6-14	*Ashy loam, ashy silt loam	*CL, ML, CL-ML		0	0	89-100	89-100	73-95
	14-41	*Clay loam, loam, gravelly loam	*CL, GC-GM, CL-ML		0	0-16	70-100	65-100	55-10
	41-48	*Sandy loam, loam, gravelly loam	*SC, CL		0	0-8	70-100	65-100	50-84
	48-61	*Loamy sand, gravelly sandy loam, loam	*SC-SM, SC, SM		0	0-16	65-100	60-100	45-96

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
156: McCrosket, dry--	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-15	*Gravelly silt loam, silt loam	*GM, ML, GC, GC-GM	*A-4		0	0-8	65-95	60-90
	15-35	*Extremely cobbly loam, very gravelly silt loam, very gravelly loam, very gravelly sandy loam	*GC-GM, GC	*A-2, A-1, A-6, A-4	0-10	10-65	35-75	30-55	25-50
	35-48	*Extremely cobbly loam, extremely gravelly loam, very cobbly sandy loam	*GC-GM, GC, GM	*A-2, A-6, A-1, A-4	0-10	10-65	35-60	25-50	20-45
157: Kruse-----	48-58	*Weathered bedrock			---	---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-6	*Ashy loam	*SC-SM, SM, ML	*A-4		0	0	89-100	89-100
	6-14	*Ashy loam, ashy silt loam	*CL, ML, CL-ML	*A-4, A-6		0	0	89-100	89-100
	14-41	*Clay loam, loam, gravelly loam	*CL, GC-GM, CL-ML	*A-6, A-4, A-7		0	0-16	70-100	65-100
41-48		*Sandy loam, loam, gravelly loam	*SC, CL	*A-4, A-6, A-2		0	0-8	70-100	65-100
	48-61	*Loamy sand, gravelly sandy loam, loam	*SC-SM, SC, SM	*A-2, A-6, A-1, A-4		0	0-16	65-100	60-100

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	inches	Pct	4		
							10	10	40
157: Noil-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Gravelly ashy loam	*SM, GM, ML	*A-4	0-1	0-18	68-91	66-91	57-90
	9-19	*Very gravelly sandy loam, cobbly sandy loam, gravelly loamy sand	*GC-GM, GM, SC	*A-1, A-2	0-1	0-30	48-70	46-69	31-56
	19-29	*Extremely gravelly sandy loam, very gravelly loam, very gravelly loamy sand	*GP-GC, GM, GP-GM	*A-1, A-2	0-17	0-44	30-60	27-58	18-51
	29-43	*Extremely gravelly sandy loam, very gravelly loamy sand, extremely cobbly sandy loam, extremely gravelly loamy coarse sand	*GP-GM, GM, GC-GM, GM	*A-1, A-2	0-24	8-49	20-64	17-62	12-50
	43-53	*Weathered bedrock			---	---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-6	*Ashy loam	*SC-SM, SM, ML	*A-4	0	0	89-100	89-100	76-97
	6-14	*Ashy loam, ashy silt loam	*CL, ML, CL-ML	*A-4, A-6	0	0	89-100	89-100	73-95
158: Kruise-----	14-41	*Clay loam, loam, gravelly loam	*CL, GC-GM, CL-ML	*A-6, A-4, A-7	0	0-16	70-100	65-100	55-10
	41-48	*Sandy loam, loam, gravelly loam	*SC, CL	*A-4, A-6, A-2	0	0-8	70-100	65-100	50-84
	48-61	*Loamy sand, gravelly sandy loam, loam	*SC-SM, SC, SM	*A-2, A-6, A-1, A-4	0	0-16	65-100	60-100	45-96
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-13	*Ashy silt loam	*CL, ML	*A-6, A-7	0	0	90-100	85-100	75-95
	13-23	*Silty clay loam, silt loam, gravelly loam	*CL	*A-7, A-6	0	0	80-100	70-100	65-95
	23-42	*Gravelly clay loam, silt loam, clay loam	*CL, CH	*A-7, A-6	0	0	85-100	75-100	65-95
	42-61	*Gravelly clay loam, gravelly silty clay loam, clay loam	*CL, CH, GC	*A-7, A-6	0	0	65-90	55-85	50-80

Table 26.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number--			
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	
159: Larkin-----	In				Pct	Pct				
	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100	60-10
	2-21	*Silt loam	*ML, CL, CL-ML	*A-4, A-6		0	0	100	90-100	90-10
	21-62	*Silty clay loam, silt loam	*CL	*A-6, A-4, A-7		0	0	100	90-100	90-10
	0-13 13-20	*Silt loam *Silty clay loam, silt loam	*CL *CL	*A-6, A-4 *A-6, A-4, A-7		0 0	0	100 85-100	100 80-100	90-10 75-10
Driscoll-----	20-24 24-54	*Silt loam, silt *Silty clay, silty clay loam	*CL, CL-ML *CH	*A-4, A-6 *A-7		0 0	0	100 95-100	100 90-100	95-10 85-10
	54-70	*Silty clay, silty clay loam	*CH	*A-7		0	0-1	95-100	90-100	85-10
	0-1	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100	100
	1-9 9-17	*Ashy silt loam *Silt loam	*ML *ML	*A-4 *A-4		0 0	0	100 100	100 100	95-10 95-10
	17-62	*Silty clay loam, silty clay	*CL	*A-6, A-7, A-4		0	0	100	100	95-10
Latahco-----	0-1	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100	60-10
	1-4 4-12	*Silt loam *Silt loam, silty clay loam	*CL, CL-ML *CL, CL-ML	*A-4, A-6 *A-4, A-7, A-6		0 0	0	100 100	100 100	90-10 90-10
	12-27	*Silt loam, very fine sandy loam	*CL-ML, ML, CL	*A-4		0	0	100	100	85-10
	27-62	*Silty clay loam, silt loam	*CL	*A-6, A-7		0	0	85-100	85-100	85-10

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
161: Lewhand-----	In				Pct	Pct			
	0-8	*Ashy silty clay loam	*CL, CL-ML A-4	*A-7, A-6, A-4	0	0	100	100	90-10
	8-12	*Silty clay loam, loam, silt loam	*CL, CL-ML A-4	*A-6, A-7, A-4	0	0	100	100	85-10
	12-18	*Silt loam, loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	18-32	*Silt loam, silty clay, silty clay loam	*CL, CL-ML	*A-6, A-4, A-7	0	0	100	100	90-10
	32-60	*Stratified silt loam to sand	*CL, ML, CL-ML, SM, CH, SC, SC-SM	*A-4, A-6, A-1, A-7, A-2	0	0	100	100	35-10
	0-7	*Ashy loam	*CL	*A-6, A-4	0	0	100	100	87-10
	7-11	*Loam, clay loam, silty clay loam, sandy loam	*CL, ML	*A-6, A-7, A-4	0	0	100	100	86-10
	11-28	*Loam, silt loam, clay loam, coarse sandy loam	*CL	*A-6, A-4	0	0	100	100	83-95
	28-36	*Loam, silt loam, sandy loam	*CL, CL-ML	*A-4, A-6	0	0	100	91-100	75-93
162: Lewhand-----	36-60	*Stratified silt loam to very gravelly loam	*SC, SP-SM, SM	*A-2, A-4, A-1	0	0	100	40-91	25-75
	0-8	*Ashy silty clay loam	*CL, CL-ML	*A-7, A-6, A-4	0	0	100	100	90-10
	8-12	*Silty clay loam, loam, silt loam	*CL, CL-ML	*A-6, A-7, A-4	0	0	100	100	85-10
	12-18	*Silt loam, loam	*CL, CL-ML	*A-4, A-6	0	0	100	100	90-10
	18-32	*Silt loam, silty clay, silty clay loam	*CL, CL-ML	*A-6, A-4, A-7	0	0	100	100	90-10
	32-60	*Stratified silt loam to sand	*CL, ML, CL-ML, SM, CH, SC, SC-SM	*A-4, A-6, A-1, A-7, A-2	0	0	100	100	35-10
	0-7	*Ashy silt loam	*CL	*A-4, A-6	0	0	100	100	90-10
	7-24	*Silty clay loam, silt loam, silty clay	*CL, CH	*A-7, A-4, A-6	0	0	100	100	95-10
	24-34	*Silt loam, silty clay loam, loam	*CL	*A-6	0	0	100	100	90-10
	34-64	*Silty clay loam, loam, silty clay	*CL, CH	*A-6, A-7, A-4	0	0	100	85-100	75-10

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
163: Longbar-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-6	*Loam	*ML, CL-ML, CL			0	0	95-100	90-100
	6-12	*Loam, silt loam	*CL, CL-ML			0	0	90-100	85-100
	12-28	*Loam, gravelly clay loam, fine sandy loam	*CL, SC			0	0-10	75-100	70-100
	28-41	*Gravelly sandy loam, loam, sandy loam	*SC-SM, CL			0	0-10	75-100	70-100
	41-50	*Sandy loam, loam, loamy coarse sand	*SC-SM, CL, CL-ML			0	0-10	75-100	70-100
	50-62	*Loamy sand, sandy loam, gravelly sandy loam	*SC-SM,			0	0-10	75-100	70-100
Bigtalk-----	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-3	*Loam	*CL, CL-ML			0	0	100	90-100
	3-8	*Loam, silt loam	*CL			0	0	95-100	90-100
	8-35	*Loam, cobbly loam	*CL, SC			0	0-25	80-100	70-95
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL			0	0-15	75-95	65-90
	48-61	*Fine sandy loam, loam, gravelly loam	*CL-ML, GM, SM, CL			0	0-10	70-95	65-90
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-6	*Loam	*ML, CL-ML, CL			0	0	95-100	90-100
164: Longbar-----	6-12	*Loam, silt loam	*CL, CL-ML			0	0	90-100	85-100
	12-28	*Loam, gravelly clay loam, fine sandy loam	*CL, SC			0	0-10	75-100	70-100
	28-41	*Gravelly sandy loam, loam, sandy loam	*SC-SM, CL			0	0-10	75-100	70-100
	41-50	*Sandy loam, loam, loamy coarse sand	*SC-SM, CL, CL-ML			0	0-10	75-100	70-100
	50-62	*Loamy sand, sandy loam, gravelly sandy loam	*SC-SM,			0	0-10	75-100	70-100
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-6	*Loam	*ML, CL-ML, CL			0	0	95-100	90-100
	6-12	*Loam, silt loam	*CL, CL-ML			0	0	90-100	85-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
164: Bigtalk-----	In				Pct	Pct			
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-3	*Loam	*CL, CL-ML			0	0	100	90-100
	3-8	*Loam, silt loam	*CL			0	0	95-100	90-100
	8-35	*Loam, cobbly loam	*CL, SC			0	0-25	80-100	70-95
	35-48	*Gravelly loam, loam, sandy loam	*SC, CL			0	0-15	75-95	65-90
165: Longpen-----	48-61	*Fine sandy loam, loam, gravelly loam	*CL-ML, GM, SM, CL			0	0-10	70-95	65-90
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-6	*Ashy silt loam	*CL, ML, CL-ML			0	0	100	90-100
	6-9	*Ashy silt loam	*CL, CL-ML			0	0	95-100	90-100
	9-49	*Silt loam, silty clay loam	*CL			0	0-5	95-100	90-100
	49-71	*Silty clay loam, silty clay, gravelly clay loam	*CL			0	0-5	85-100	75-100
166: Longpen-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-6	*Ashy silt loam	*CL, ML, CL-ML			0	0	100	90-100
	6-9	*Ashy silt loam	*CL, CL-ML			0	0	95-100	90-100
	9-49	*Silt loam, silty clay loam	*CL			0	0-5	95-100	90-100
	49-71	*Silty clay loam, silty clay, gravelly clay loam	*CL			0	0-5	85-100	75-100
167: Meland-----	0-16	*Silt loam	*ML, CL			0	0	95-100	89-100
	16-35	*Gravelly silty clay loam, clay loam, gravelly clay loam	*CL, SC			0	0-8	79-100	53-100
	35-45	*Unweathered bedrock				---	---	---	---

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
167: Jacket-----	In				Pct	Pct			
	0-7	*Silt loam	*CL, ML, CL-ML	*A-4	0	0	100	100	94-10
	7-27	*Silty clay loam	*CL, CH	*A-7, A-6	0	0	100	100	96-10
	27-56	*Silty clay loam, silty clay	*CH, CL	*A-7	0	0	100	100	96-10
	56-63	*Silty clay, silty clay loam, gravelly silty clay loam	*CH, CL	*A-7	0	0-4	79-100	75-100	70-10
168: Meland-----	0-16	*Silt loam	*ML, CL	*A-7, A-6	0	0	95-100	89-100	80-99
	16-35	*Gravelly silty clay loam, clay loam, gravelly clay loam	*SC	*A-7, A-6	0	0-8	79-100	53-100	51-10
	35-45	*Unweathered bedrock			---	---	---	---	---
	0-13	*Gravelly silt loam	*SM, SC-SM, ML, CL-ML, GC-GM	*A-7, A-2, A-4	0	0-4	67-90	38-90	34-88
Keuterville-----	13-49	*Very gravelly silty clay loam, very cobbly clay loam, very gravelly loam	*GC, CL	*A-7, A-2, A-6	0	0-32	47-82	29-82	27-82
	49-61	*Very cobbly silty clay loam, very gravelly loam, very gravelly clay loam	*GC, CL, GC-GM, CL-ML	*A-6, A-7, A-4, A-2	0	9-34	47-84	22-84	20-84
	0-3	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	3-6	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	100	90-96
169: Mushel-----	6-13	*Ashy silt loam	*ML	*A-4, A-5	0	0	87-100	87-100	77-98
	13-21	*Loam	*CL, CL-ML	*A-4, A-6	0	0	91-100	91-100	75-96
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-6, A-2	0	0-8	62-100	61-100	50-96
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-2	0-9	0-9	66-100	65-100	53-91
	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM	*A-2, A-6, A-4, A-1	0	0	68-100	67-100	44-88



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
169: Brodeer-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	99-10
	4-21	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0-1	0-13	87-100	86-100	85-10
	21-59	*Loam, very fine sandy loam, gravelly loam, gravelly coarse sandy loam	*CL, CL-ML	*A-4, A-6	0-1	0-9	68-100	67-100	61-10
	59-67	*Gravelly sandy loam, loam, very gravelly coarse sandy loam	*SC-SM, GM, CL, SM, CL-ML, ML	*A-4, A-1, A-6	0	0	52-100	50-100	36-91
170: Mushel-----	0-3	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	3-6	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	100	90-96
	6-13	*Ashy silt loam	*ML	*A-4, A-5	0	0	87-100	87-100	77-98
	13-21	*Loam	*CL, CL-ML	*A-4, A-6	0	0	91-100	91-100	75-96
	21-39	*Loam, gravelly fine sandy loam, sandy loam	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-6, A-2	0	0-8	62-100	61-100	50-96
	39-48	*Loam, coarse sandy loam, gravelly loamy sand	*CL, GC-GM, SC-SM, CL-ML	*A-4, A-2	0-9	0-9	66-100	65-100	53-91
	48-68	*Sandy loam, loamy coarse sand, gravelly sandy loam	*SC, SC-SM	*A-2, A-6, A-4, A-1	0	0	68-100	67-100	44-88
Dullaxe-----	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-7	*Ashy loam	*ML, MH	*A-5, A-4	0	0	95-100	95-100	65-95
	7-19	*Ashy loam, ashy silt loam	*ML, MH	*A-5, A-4	0	0	95-100	90-100	60-95
	19-27	*Loam, sandy loam, gravelly loam	*CL-ML, CL	*A-4	0	0-10	90-100	75-100	60-90
	27-38	*Sandy loam, loam, fine gravelly sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4	0	0-24	75-100	70-95	50-80
	38-46	*Sandy loam, fine gravelly sandy loam, loamy coarse sand	*SC-SM, SC, SM	*A-2, A-1	0	0-15	80-100	65-100	40-70
	46-66	*Loamy sand, sandy loam, very gravelly loamy coarse sand	*SM, SP-SM, SC-SM	*A-2, A-3	0	0-3	75-100	70-100	55-85

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
171: Nakarna, high precipitation--	In					Pct			
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-10
	1-2	*Moderately decomposed plant material	*PT	*A-8		0	0	100	60-10
	2-4	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	80-100	75-100
	4-16	*Silt loam	*ML, MH	*A-5, A-4		0	0	80-100	75-100
172: Nakarna, high precipitation--	16-36	*Loam, fine sandy loam, gravelly fine sandy loam	*SM, CL-ML, ML	*A-4, A-2		0	0-10	75-95	70-90
	36-49	*Gravelly fine sandy loam, gravelly sandy loam, fine sandy loam	*SM	*A-2, A-4, A-1		0	0-20	65-85	60-80
	49-59	*Weathered bedrock				---	---	---	---
173: Nakarna-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-10
	1-5	*Ashy silt loam	*ML, MH	*A-4, A-5		0	0	72-100	71-100
	5-15	*Ashy silt loam, ash loam	*ML, MH	*A-4, A-5		0	0	72-100	71-100
	15-34	*Gravelly loam, cobbly loam, silt loam, sandy loam	*ML, CL, CL-ML, GM	*A-4		0	0-25	65-100	64-100
	34-42	*Gravelly sandy loam, loamy sand, very cobbly sandy loam	*SM, SC-SM, GM	*A-2, A-4, A-1		0	0-24	53-91	52-91
173: Nakarna-----	42-52	*Weathered bedrock				---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	60-10
	1-5	*Ashy silt loam	*ML, MH	*A-4, A-5		0	0	72-100	71-100
	5-15	*Ashy silt loam, ash loam	*ML, MH	*A-4, A-5		0	0	72-100	71-100
173: Nakarna-----	15-34	*Gravelly loam, cobbly loam, silt loam, sandy loam	*ML, CL, CL-ML, GM	*A-4		0	0-25	65-100	64-100
	34-42	*Gravelly sandy loam, loamy sand, very cobbly sandy loam	*SM, SC-SM, GM	*A-2, A-4, A-1		0	0-24	53-91	52-91
	42-52	*Weathered bedrock				---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-						
			Unified	AASHTO	inches	Pct	inches		4	10	40		
							>10	3-10					
173: Nakarna, warm---	In					Pct	Pct						
	0-1	*Slightly decomposed plant material	*PT				0	0	100	100	60-10		
	1-5	*Ashy silt loam	*ML, MH				0	0	72-100	71-100	67-10		
	5-15	*Ashy silt loam, ashy loam	*ML, MH				0	0	72-100	71-100	67-10		
	15-34	*Gravelly loam, cobbly loam, silt loam, sandy loam	*ML, CL, CL-ML, GM				0	0-25	65-100	64-100	60-10		
	34-42	*Gravelly sandy loam, loamy sand, very cobbly sandy loam	*SM, SC-SM, GM				0	0-24	53-91	52-91	44-89		
174: Narnett-----	42-52	*Weathered bedrock				---	---	---	---	---	---		
	0-9	*Medial silt loam	*ML				0	0	100	95-100	90-95		
	9-15	*Silt loam, loam	*CL				0	0	100	95-100	90-95		
	15-50	*Silt loam, clay loam, loam	*CL				0	0-8	95-100	85-100	80-95		
	50-58	*Silt loam, gravelly loam, clay loam	*CL				0	0-16	71-100	69-100	66-10		
	58-80	*Very gravelly silt loam, loam, gravelly sand	*CL, GC-GM				0	0-8	57-92	55-91	48-91		
Jury-----													
	0-2	*Slightly decomposed plant material	*PT				0	0	100	100	60-10		
	2-6	*Medial silt loam	*ML, MH				0	0	100	95-100	90-95		
	6-29	*Medial silt loam, gravelly medial silt loam, gravelly medial loam	*ML, SM, MH				0	0	85-100	70-100	60-95		
	29-48	*Sandy loam, gravelly loam, cobbly coarse sandy loam	*SC-SM, CL, SM				0	0-15	65-100	55-95	40-85		
	48-62	*Loamy sand, cobbly sandy loam, very gravelly loamy coarse sand	*SC-SM, SC, SP-SM, SM				0-10	0-5	60-85	60-80	45-80		

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
175: Neva-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT				0	100	100
	2-4	*Ashy silt loam	*ML, OL			0	0	95-100	95-100
	4-13	*Ashy silt loam	*ML			0	0	95-100	95-100
	13-25	*Loam, silt loam, cobbly silt loam	*CL, CL-ML			0	0-30	80-100	70-95
	25-50	*Loam, silty clay loam, sandy clay loam	*CL			0	0	90-100	85-95
	50-56	*Loam, sandy clay loam	*CL			0	0	90-100	85-95
	56-62	*Coarse sandy loam, loam	*SC, SC-SM, CL, CL-ML			0	0	90-100	85-95
176: Newlig-----	0-3	*Silt loam	*CL, CL-ML, ML			0	0	100	100
	3-18	*Silt loam, loam	*CL, CL-ML, ML			0	0	100	100
	18-22	*Very fine sandy loam, silt loam, loam	*CL, CL-ML, ML			0	0	100	100
	22-30	*Loam	*CL, CL-ML			0	0	100	90-100
	30-55	*Clay loam, loam	*CL, ML, CL-ML			0	0	100	90-100
	55-65	*Loam, sandy loam, fine sandy loam	*CL, SC-SM, CL-ML, SC			0	0	100	90-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-						
			Unified	AASHTO	inches	Pct	3-10		4	10	40		
							>10	inches					
177: Noil-----	In					Pct	Pct						
	0-1	*Slightly decomposed plant material	*PT				0	0	100	100	60-10		
	1-9	*Gravelly ashy loam	*SM, GM, ML	*A-4	0-1	0-18	68-91	66-91	57-90				
	9-19	*Very gravelly sandy loam, cobbly sandy loam, gravelly loamy sand	*GC-GM, GM, SC	*A-1, A-2	0-1	0-30	48-70	46-69	31-56				
	19-29	*Extremely gravelly sandy loam, very gravelly loam, very gravelly loamy sand	*GP-GC, GM, GP-GM	*A-1, A-2	0-17	0-44	30-60	27-58	18-51				
	29-43	*Extremely gravelly sandy loam, very gravelly loamy sand, extremely cobbly sandy loam, extremely gravelly loamy coarse sand	*GP-GM, GM GC-GM, GM	*A-1, A-2	0-24	8-49	20-64	17-62	12-50				
	43-53	*Weathered bedrock			---	---	---	---	---				
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10				
	1-5	*Ashy loam	*ML	*A-4	0	0	100	95-100	85-90				
	5-12	*Ashy loam, ashy silt loam	*CL-ML, ML, CL	*A-4	0	0	100	95-100	85-90				
Keeler-----	12-39	*Loam, silty clay loam, gravelly loam	*CL, SC-SM	*A-4, A-6	0	0-10	85-100	70-100	65-85				
	39-48	*Gravelly sandy loam, sandy loam, fine gravelly clay loam, silty clay loam	*SC, SC-SM, GC, CL	*A-2, A-1, A-6	0-9	0-6	70-100	65-100	50-90				
	48-74	*Gravelly sandy loam, very gravelly coarse sandy loam, gravelly loam, gravelly loamy sand	*SC-SM, SC, GM	*A-2, A-1, A-4	0	2-7	60-80	55-80	40-70				

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	4		
							10		
178: Noil-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Gravelly ashy loam	*SM, GM, ML	*A-4	0-1	0-18	68-91	66-91	57-90
	9-19	*Very gravelly sandy loam, cobbly sandy loam, gravelly loamy sand	*GC-GM, GM, SC	*A-1, A-2	0-1	0-30	48-70	46-69	31-56
	19-29	*Extremely gravelly sandy loam, very gravelly loam, very gravelly loamy sand	*GP-GC, GM, GP-GM	*A-1, A-2	0-17	0-44	30-60	27-58	18-51
	29-43	*Extremely gravelly sandy loam, very gravelly loamy sand, extremely cobbly sandy loam, extremely gravelly loamy coarse sand	*GP-GM, GM, GC-GM, GM	*A-1, A-2	0-24	8-49	20-64	17-62	12-50
	43-53	*Weathered bedrock			---	---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-8	*Ashy loam	*ML, GM, MH	*A-5, A-4	0	0	64-100	63-100	60-10
	8-21	*Ashy loam, ashy silt loam, gravelly ashy sandy loam	*ML, MH, GM	*A-5, A-4	0	0	57-100	56-100	53-10
Bouldercreek, warm-----	21-27	*Gravelly loam, very cobbly coarse sandy loam, very gravelly fine sandy loam	*CL-ML, GM, CL	*A-4, A-1, A-2	0-32	0-50	35-69	32-68	30-68
	27-34	*Very gravelly sandy loam, very gravelly loam, extremely cobbly sandy loam	*GC-GM, GP-GM, GW-GM, GC	*A-1, A-4, A-2	0-32	0-45	22-76	20-75	14-65
	34-53	*Very cobbly coarse sandy loam, extremely stony loam, very gravelly fine sandy loam	*GC-GM, GP-GM, SC, GW-GM	*A-1, A-4, A-2	0-32	17-65	24-100	21-100	12-69
	53-69	*Very gravelly loamy sand, extremely stony sandy loam, very cobbly loamy sand	*GP-GM, SC, GP, GC-GM	*A-1, A-2	0-72	23-63	25-66	22-65	16-56

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
178: Rock outcrop----	In				Pct	Pct			
	0-60	*Unweathered bedrock							
	0-3	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	3-6	*Medial silt loam	*ML, OL	*A-4	0	0	100	100	85-90
	6-17	*Medial silt loam	*ML	*A-4	0	0	100	100	85-90
179: Norwidge, moist	17-26	*Silt loam	*CL-ML, ML, CL	*A-4, A-6	0	0	100	95-100	85
	26-42	*Silty clay loam, silty clay loam	*CL	*A-6, A-4	0	0	100	95-100	85
	42-81	*Silty clay loam, silty clay loam	*CL	*A-7, A-4	0	0	90-100	85-100	75-85
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-3	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	100	100	90-100
Threebear, moist	3-18	*Medial silt loam	*ML	*A-5, A-4	0	0	100	100	90-100
	18-26	*Silt loam	*CL	*A-6, A-4	0	0	100	100	90-100
	26-40	*Silt loam, silty clay loam	*CL	*A-6, A-4	0	0	100	95-100	90-100
	40-69	*Silty clay loam, silt loam, sandy clay loam	*CL	*A-6, A-4	0	0	100	90-100	85-100
180: Odonnell-----	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-5	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	90-100	85-100	80-100
	5-16	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0	90-100	85-100	80-95
	16-25	*Silt loam, loam	*CL, CL-ML	*A-4, A-6	0	0	90-100	85-100	75-95
	25-44	*Silt loam, silty clay loam	*CL, CL-ML	*A-6, A-4	0	0	95-100	90-100	80-100
44-64	*Silt loam, silty clay loam, clay loam	*CL	*A-6, A-4, A-7	0	0	90-100	85-100	75-100	

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
180: Grandad-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
181: Odonnell-----	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	2-3	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
	3-7	*Medial silt loam	*ML, OH	*A-4, A-5		0	0	100	85-100
	7-17	*Medial silt loam	*ML, MH	*A-4, A-5		0	0	100	85-100
	17-25	*Silt loam, loam	*CL, CL-ML, ML	*A-4		0	0	100	85-100
	25-53	*Silty clay loam, silt loam, loam	*CL	*A-6, A-4		0	0	95-100	85-100
	53-63	*Silt loam, fine gravelly loam	*CL, SC-SM, SM, ML	*A-4		0	0-10	85-100	55-95



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
182: Oxyaquic Xerofluvents, occasionally flooded-----	In				Pct	Pct			
	0-6	*Fine sandy loam	*SC-SM, SM, CL	*A-4, A-2	0	0-1	77-100	75-100	62-10
	6-17	*Loamy fine sand, fine sandy loam, very cobbley sand	*SM, SC-SM	*A-2	0-1	0-43	61-100	58-100	51-97
	17-18	*Very fine sandy loam, loamy fine sand	*ML, SM	*A-4	0	0	100	100	98-10
	18-39	*Loamy fine sand, loamy sand	*SM	*A-2, A-4	0	0	100	100	94-97
	39-41	*Very fine sandy loam, loamy fine sand	*ML	*A-4	0	0	100	100	98-10
	41-60	*Very cobbly loamy sand, fine sandy loam, extremely cobbly sand	*SM, GP-GM, GM	*A-1, A-2	0-17	0-42	44-100	40-100	35-80
Itzee-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-4	*Sandy loam	*SC-SM, SC, SM	*A-2, A-4, A-6	0	0	90-100	85-100	55-70
	4-12	*Fine sandy loam, loamy fine sand, coarse sandy loam	*SM, SC, SC-SM	*A-2, A-1, A-6, A-4	0	0	90-100	85-100	45-75
	12-47	*Loamy fine sand, fine sandy loam	*SC-SM, SM, SC	*A-2	0	0-1	79-100	78-100	69-10
	47-60	*Extremely cobbly fine sand, very gravelly loamy sand	*GP-GM, SC, SW-SM, SM, SC-SM, GW-GM, GM	*A-1, A-2	0	25-50	35-70	35-60	30-45
183: Pits, quarry-----	0-60	*Unweathered bedrock			---	---	---	---	---

Table 26.--Engineering Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number--		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
184: Placer-----	In					Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy loam	*CL-ML, CL, ML	*A-4, A-6		0	0	100	100
	5-10	*Ashy loam, ashly silt loam	*CL-ML, CL, ML	*A-4, A-6		0	0	100	100
	10-31	*Loam, paragravelly loam, very paragravelly silty clay loam, paracobbly loam	*CL	*A-6, A-7		0	0	90-100	80-100
	31-52	*Extremely paracobbly loam, very paragravelly silt loam	*CL	*A-6		0	0-35	70-100	60-100
	52-62	*Weathered bedrock				---	---	---	---
	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	2-4	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
	4-6	*Ashy loam	*ML, MH	*A-5, A-4		0	0	100	100
Dowper-----	6-21	*Ashy loam	*ML, MH	*A-5, A-4		0	0	100	100
	21-58	*Loam, paragravelly loam, clay loam, gravelly loam	*CL	*A-6, A-4		0	0	85-100	75-100
	58-65	*Gravelly sandy clay loam, very paragravelly clay loam, gravelly clay loam, paracobbly loam	*CL, GC	*A-6		0	0	61-91	60-90
	65-75	*Weathered bedrock				---	---	---	---
	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	2-3	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
	3-7	*Ashy silt loam	*ML, OH	*A-4, A-5		0	0	100	100
	7-14	*Ashy silt loam, ashly loam	*ML	*A-4, A-5		0	0	100	100
	14-38	*Silt loam, silty clay loam	*CL, CL-ML	*A-6, A-4		0	0	100	95-100
	38-95	*Silty clay loam, silt loam	*CL	*A-6, A-4		0	0	85-100	84-100
Grangemont-----	0-2	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	2-3	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
	3-7	*Ashy silt loam	*ML, OH	*A-4, A-5		0	0	100	100
	7-14	*Ashy silt loam, ashly loam	*ML	*A-4, A-5		0	0	100	100
	14-38	*Silt loam, silty clay loam	*CL, CL-ML	*A-6, A-4		0	0	100	95-100
	38-95	*Silty clay loam, silt loam	*CL	*A-6, A-4		0	0	85-100	84-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
185: Poorman, dry----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy loam	*ML	*A-4, A-5		0	0	95-100	90-100
	3-13	*Ashy loam, ashy silt loam	*ML	*A-4, A-5		0	0	95-100	90-100
	13-29	*Loam, cobbly loam, gravelly sandy loam	*CL-ML, GC-GM, CL	*A-4, A-2		0	0-15	65-100	55-100
	29-36	*Gravelly loam, gravelly sandy loam, coarse sandy loam	*CL-ML, SM, ML	*A-4		0	0-10	75-100	75-100
	36-52	*Sandy loam, gravelly sandy loam, coarse sandy loam	*SC-SM, SM, CL-ML, CL	*A-4, A-2		0	0-9	80-100	75-100
	52-61	*Sandy loam, loamy sand, gravelly sandy loam	*SC-SM, SM, SC, CL-ML, ML	*A-2, A-4, A-1		0	0-10	70-100	65-100
186: Poorman, dry----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Ashy loam	*ML	*A-4, A-5		0	0	95-100	90-100
	3-13	*Ashy loam, ashy silt loam	*ML	*A-4, A-5		0	0	95-100	90-100
	13-29	*Loam, cobbly loam, gravelly sandy loam	*CL-ML, GC-GM, CL	*A-4, A-2		0	0-15	65-100	55-100
	29-36	*Gravelly loam, gravelly sandy loam, coarse sandy loam	*CL-ML, SM, ML	*A-4		0	0-10	75-100	75-100
	36-52	*Sandy loam, gravelly sandy loam, coarse sandy loam	*SC-SM, SM, CL-ML, CL	*A-4, A-2		0	0-9	80-100	75-100
	52-61	*Sandy loam, loamy sand, gravelly sandy loam	*SC-SM, SM, SC, CL-ML, ML	*A-2, A-4, A-1		0	0-10	70-100	65-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
186: Poorman-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT				0	0	100
	1-3	*Ashy loam	*ML	*A-4, A-5			0	0	95-100
	3-13	*Ashy loam, ashy silt loam	*ML	*A-4, A-5			0	0	95-100
	13-29	*Loam, cobbly loam, gravelly sandy loam	*CL-ML, GC-GM, CL	*A-4, A-2			0	0-15	65-100
	29-36	*Gravelly loam, gravelly sandy loam, coarse sandy loam	*CL-ML, SM, ML	*A-4			0	0-10	75-100
	36-52	*Sandy loam, gravelly sandy loam, coarse sandy loam	*SC-SM, SM, CL-ML, CL	*A-4, A-2			0	0-9	80-100
	52-61	*Sandy loam, loamy sand, gravelly sandy loam	*SC-SM, SM, SC, CL-ML, ML	*A-2, A-4, A-1			0	0-10	70-100
187: Poorman-----	0-1	*Slightly decomposed plant material	*PT	*A-8			0	0	100
	1-3	*Ashy loam	*ML	*A-4, A-5			0	0	95-100
	3-13	*Ashy loam, ashy silt loam	*ML	*A-4, A-5			0	0	95-100
	13-29	*Loam, cobbly loam, gravelly sandy loam	*CL-ML, CL, GC-GM	*A-4, A-2			0	0-15	65-100
	29-36	*Gravelly loam, gravelly sandy loam, coarse sandy loam	*CL-ML, SM, ML	*A-4			0	0-10	75-100
	36-52	*Sandy loam, gravelly sandy loam, coarse sandy loam	*SC-SM, SM, CL-ML, CL	*A-4, A-2			0	0-9	80-100
	52-61	*Sandy loam, loamy sand, gravelly sandy loam	*SC-SM, SM, SC, CL-ML, ML	*A-2, A-4, A-1			0	0-10	70-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
187: Grandad-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
188: Poorman-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Ashy loam	*ML	*A-4, A-5		0	0	95-100	90-100
	3-13	*Ashy loam, ashy silt loam	*ML	*A-4, A-5		0	0	95-100	90-100
	13-29	*Loam, cobbly loam, gravelly sandy loam	*CL-ML, GC-GM, CL	*A-4, A-2		0	0-15	65-100	55-100
	29-36	*Gravelly loam, gravelly sandy loam, coarse sandy loam	*CL-ML, SM, ML	*A-4		0	0-10	75-100	75-100
	36-52	*Sandy loam, gravelly sandy loam, coarse sandy loam	*SC-SM, SM, CL-ML, CL	*A-4, A-2		0	0-9	80-100	75-100
	52-61	*Sandy loam, loamy sand, gravelly sandy loam	*SC-SM, SM, SC, CL-ML, ML	*A-2, A-4, A-1		0	0-10	70-100	65-100

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
188: Grandad-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam,	*CL, CL-ML	*A-4		0	0	77-100	76-100
		gravelly loam							
	30-39	*Gravelly loam, loam,	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
		fine sandy loam							
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam,	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
189: Poorman-----	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Ashy loam	*ML	*A-4, A-5		0	0	95-100	90-100
	3-13	*Ashy loam, ashy silt loam	*ML	*A-4, A-5		0	0	95-100	90-100
	13-29	*Loam, cobbly loam, gravelly sandy loam	*CL-ML, CL GC-GM, CL	*A-4, A-2		0	0-15	65-100	55-100
	29-36	*Gravelly loam	*CL-ML, SM, ML	*A-4		0	0-10	75-100	75-100
		coarse sandy loam							
189: Poorman-----	36-52	*Sandy loam, gravelly sandy loam, coarse sandy loam	*SC-SM, SM, CL-ML, CL	*A-4, A-2		0	0-9	80-100	75-100
	52-61	*Sandy loam, loamy sand, gravelly sandy loam	*SC-SM, SM, SC, CL-ML, ML	*A-2, A-4, A-1		0	0-10	70-100	65-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
189: Grandad, dry----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
190: Poorman-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-3	*Ashy loam	*ML	*A-4, A-5		0	0	95-100	90-100
	3-13	*Ashy loam, ashy silt loam	*ML	*A-4, A-5		0	0	95-100	90-100
	13-29	*Loam, cobbly loam, gravelly sandy loam	*CL-ML, GC-GM, CL	*A-4, A-2		0	0-15	65-100	55-100
	29-36	*Gravelly loam, gravelly sandy loam, coarse sandy loam	*CL-ML, SM, ML	*A-4		0	0-10	75-100	75-100
	36-52	*Sandy loam, gravelly sandy loam, coarse sandy loam	*SC-SM, SM, CL-ML, CL	*A-4, A-2		0	0-9	80-100	75-100
	52-61	*Sandy loam, loamy sand, gravelly sandy loam	*SC-SM, SM, SC, CL-ML, ML	*A-2, A-4, A-1		0	0-10	70-100	65-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
190: Grandad, dry----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH			0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML			0	0	91-100	91-100
	19-30	*Loam, sandy loam,	*CL, CL-ML			0	0	77-100	76-100
		gravelly loam							70-100
	30-39	*Gravelly loam, loam,	*CL, GC-GM			0-9	0-17	65-91	63-91
		fine sandy loam							59-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM			0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL			0-8	0-8	75-92	74-91
191: Reggear-----	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC			0-8	0-16	65-92	64-91
									45-79
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-8	*Ashy silt loam	*ML			0	0	100	100
	8-13	*Ashy silt loam	*ML, CL-ML, CL			0	0	100	100
	13-22	*Silt loam	*CL, CL-ML			0	0	100	100
	22-31	*Silt loam, silty clay loam	*CL			0	0	100	100
	31-60	*Silt loam, clay, silty clay loam	*CL, CH			0	0	100	100
	60-86	*Silt loam, silty clay loam, clay loam	*CL			0	0	100	100
									90-100
Kauder-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-4	*Ashy silt loam	*ML, MH			0	0	100	100
	4-15	*Ashy silt loam	*ML, MH			0	0	100	100
	15-23	*Silt loam	*ML			0	0	100	100
	23-34	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	100
	34-95	*Silty clay loam, silt loam, clay loam	*CL			0	0	100	100
									95-100
									90-100
									95-100
									90-100



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
192: Reggear-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-8	*Ashy silt loam	*ML			0	0	100	100
	8-13	*Ashy silt loam	*ML, CL-ML, CL			0	0	100	100
	13-22	*Silt loam	*CL, CL-ML			0	0	100	100
	22-31	*Silt loam, silty clay loam	*CL			0	0	100	100
	31-60	*Silt loam, clay, silty clay loam	*CL, CH			0	0	100	100
	60-86	*Silt loam, silty clay loam, clay loam	*CL			0	0	100	100
Seddow-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML			0	0	85-100	75-100
	3-5	*Ashy silt loam	*ML			0	0	95-100	90-100
	5-13	*Ashy silt loam	*CL, CL-ML			0	0	68-100	66-100
	13-35	gravelly ashy loam							
		*Silt loam, gravelly silty clay loam, gravelly loam	*CL, GC-GM, CL-ML			0	0	65-95	60-90
	35-44	*Very gravelly silt loam, extremely gravelly clay loam, gravelly clay loam	*GC, GM, CL			0	0-35	35-75	30-65
	44-54	*Unweathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
193: Rettig, high elevation-----	In					Pct			
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-7	*Ashy loam	*ML			0	0	92-100	70-100
	7-27	*Ashy loam, ashy silt loam	*ML			0	0	86-100	65-100
								62-100	62-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM			0	0	80-100	60-100
								45-87	45-87
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL			0-17	0-42	70-100	50-100
194: Rettig-----								35-86	35-86
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC			0-8	0-70	65-91	40-91
								30-75	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC			0	9-32	60-90	35-81
								25-65	25-65
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
								60-100	60-100
	1-7	*Ashy loam	*ML			0	0	92-100	70-100
194: Rettig-----	7-27	*Ashy loam, ashy silt loam	*ML			0	0	86-100	65-100
								62-100	62-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM			0	0	80-100	60-100
								45-87	45-87
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL			0-17	0-42	70-100	50-100
								35-86	35-86
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC			0-8	0-70	65-91	40-91
								30-75	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC			0	9-32	60-90	35-81
								25-65	25-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-					
			Unified	AASHTO	inches	3-10 inches	4			10	40	
195: Rettig, cold----	In					Pct	Pct					
	0-1	*Moderately decomposed plant material	*PT					0	0	100	100	60-10
	1-7	*Ashy loam	*ML					0	0	92-100	70-100	66-10
	7-27	*Ashy loam, ashy silt loam	*ML					0	0	86-100	65-100	62-10
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM					0	0	80-100	60-100	45-87
	34-47	*Gravelly sandy loam, cobbley loam, very gravelly loam,	*SC-SM, SM, CL					0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbley sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC					0-8	0-70	65-91	40-91	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC					0	9-32	60-90	35-81	25-65
196: Rettig, cool----	0-1	*Moderately decomposed plant material	*PT					0	0	100	100	60-10
	1-7	*Ashy loam	*ML					0	0	92-100	70-100	66-10
	7-27	*Ashy loam, ashy silt loam	*ML					0	0	86-100	65-100	62-10
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM					0	0	80-100	60-100	45-87
	34-47	*Gravelly sandy loam, cobbley loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL					0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbley sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC					0-8	0-70	65-91	40-91	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC					0	9-32	60-90	35-81	25-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
196: Rettig, dry-----	In					Pct			
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-7	*Ashy loam	*ML			0	0	92-100	70-100
	7-27	*Ashy loam, ashy silt loam	*ML			0	0	86-100	65-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM			0	0	80-100	60-100
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam,	*SC-SM, SM, CL		0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC		0-8	0-70	65-91	40-91	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC		0	9-32	60-90	35-81	25-65
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-7	*Ashy loam	*ML			0	0	92-100	70-100
197: Rettig-----	7-27	*Ashy loam, ashy silt loam	*ML			0	0	86-100	65-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM			0	0	80-100	60-100
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL		0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC		0-8	0-70	65-91	40-91	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC		0	9-32	60-90	35-81	25-65
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-7	*Ashy loam	*ML			0	0	92-100	70-100
	7-27	*Ashy loam, ashy silt loam	*ML			0	0	86-100	65-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM			0	0	80-100	60-100
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL		0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC		0-8	0-70	65-91	40-91	30-75
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC		0	9-32	60-90	35-81	25-65

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	inches	Pct	4		
							10		
197: Grandad-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	100	100
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5		0	0	91-100	91-100
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4		0	0	77-100	76-100
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4		0-9	0-17	65-91	63-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4		0-9	0-17	72-91	71-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4		0-8	0-8	75-92	74-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-16	65-92	64-91
198: Rettig, warm, dry-----	0-1	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100
	1-7	*Ashy loam	*ML	*A-5, A-4		0	0	92-100	70-100
	7-27	*Ashy loam, ashy silt loam	*ML	*A-5, A-4		0	0	86-100	65-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM	*A-2, A-4		0	0	80-100	60-100
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL	*A-4, A-1, A-2		0-17	0-42	70-100	50-100
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-70	65-91	40-91
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC	*A-1, A-4, A-2		0	9-32	60-90	35-81

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
198: Township-----	In					Pct			
	0-1	*Slightly decomposed plant material	*PT				0	0	100
	1-3	*Ashy silt loam	*ML, MH				0-5	0-10	90-100
	3-17	*Ashy silt loam, ashy loam	*ML				0	0-10	90-100
	17-35	*Very flaggy loam	*GC, CL, GC-GM				19-27	21-51	46-89
	35-43	*Very cobbly loam	*GC, CL				0-14	0-55	42-76
	43-53	*Extremely cobbly sandy loam	*GC, GP-GC				0-18	18-63	25-62
	53-66	*Extremely flaggy sandy loam	*GC, GP-GC, SC				24-34	19-43	29-100
									26-100
									19-81
199: Rettig-----	0-1	*Moderately decomposed plant material	*PT				0	0	100
	1-7	*Ashy loam	*ML				0	0	92-100
	7-27	*Ashy loam, ashy silt loam	*ML				0	0	86-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM				0	0	80-100
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam,	*SC-SM, SM, CL				0-17	0-42	70-100
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very	*SC-SM, SM, SC				0-8	0-70	65-91
		paragravelly sandy loam							40-91
	63-66	*Very gravelly sandy loam, coarse sandy loam, very	*SC-SM, SM, SC				0	9-32	60-90
		paragravelly loamy sand							35-81
									25-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	inches	3-10 inches	4	10	40
199: Township, wet----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4	0-5	0-10	0-10	90-100	85-100
	3-17	*Ashy silt loam, ashy loam	*ML	*A-5, A-4	0	0-10	0-10	90-100	85-100
	17-35	*Very flaggy loam	*GC, CL, GC-GM	*A-6, A-1	19-27	21-51	46-89	44-88	35-84
	35-43	*Very cobbly loam	*GC, CL	*A-4, A-6, A-2	0-14	0-55	42-76	40-75	40-75
	43-53	*Extremely cobbly sandy loam	*GC, GP-GC	*A-2, A-1	0-18	18-63	25-62	22-60	16-52
	53-66	*Extremely flaggy sandy loam	*GC, GP-GC, SC	*A-2, A-6	24-34	19-43	29-100	26-100	19-81
	0-3	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	3-8	*Medial loam	*ML, MH	*A-5, A-4	0	0	90-100	85-95	80-90
Stepoff-----	8-24	*Medial loam, cobbly medial silt loam, medial silt loam	*ML	*A-5, A-4	0	0-15	80-100	75-95	65-90
	24-38	*Gravelly loam, loam, loamy coarse sand	*SC, GC-GM, CL, SC-SM	*A-4, A-6	0	0-15	65-90	60-85	55-75
	38-46	*Gravelly loam gravelly sandy loam, loamy coarse sand	*CL, GC-GM, SC-SM	*A-4, A-1, A-2, A-6	0	0-15	60-90	55-85	35-70
	46-63	*Very cobbly loam, very gravelly loamy sand, coarse sand	*GC-GM, SC-SM, GP-GM, SC, GW-GM, GC	*A-2, A-1	0	0-35	50-85	45-80	30-65
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-100
	1-9	*Ashy silt loam	*ML	*A-4, A-5	0	0	95-100	90-100	80-95
	9-17	*Ashy silt loam, ashy loam	*ML	*A-4	0	0	90-100	85-100	80-95
	17-27	*Silt loam, gravelly silt loam	*CL	*A-4, A-6	0	0	80-100	75-100	70-95
	27-44	*Silt loam, gravelly silt loam, silty clay loam	*CL	*A-6, A-4	0	0-8	75-100	70-100	65-100
	44-60	*Cobbly silty clay loam	*CL, GC	*A-6, A-7	0	3-21	54-87	54-87	50-87
200: Riswold-----	60-72	*Very cobbly silty clay loam	*CL, GC	*A-7, A-2	0	5-51	37-68	34-67	32-67

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
200: Cranberry-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-5	*Ashy silt loam	*ML, MH			0	0	100	100
	5-11	*Ashy silt loam	*ML, MH			0	0	100	100
	11-16	*Ashy silt loam	*ML, MH			0	0	100	100
	16-22	*Silt loam, silty clay loam	*CL			0	0	100	95-100
	22-32	*Silt loam	*CL			0	0	100	95-100
	32-40	*Silty clay loam, silt loam, gravelly silt loam	*CL			0	0	100	95-100
	40-50	*Silty clay loam, silt loam, gravelly silt loam	*CL			0	0	80-100	75-100
	50-57	*Clay loam, loam	*CL			0	0	95-100	85-100
	57-62	*Clay loam, loam, very paragravelly silty clay loam	*CL, CL-ML			0	0	95-100	85-100
201: Riswold-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-9	*Ashy silt loam	*ML			0	0	95-100	90-100
	9-17	*Ashy silt loam, ashy loam	*ML			0	0	90-100	85-100
	17-27	*Silt loam, gravelly silt loam	*CL			0	0	80-100	75-100
	27-44	*Silt loam, gravelly silt loam, silty clay loam	*CL			0	0-8	75-100	70-100
	44-60	*Cobbly silty clay loam	*CL, GC			0	3-21	54-87	50-87
	60-72	*Very cobbly silty clay loam	*CL, GC			0	5-51	37-68	34-67



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
201: Grangemont-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	2-3	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	3-7	*Ashy silt loam	*ML, OH	*A-4, A-5	0	0	100	100	90-10
	7-14	*Ashy silt loam, ashy loam	*ML	*A-4, A-5	0	0	100	100	90-10
	14-38	*Silt loam, silty clay loam	*CL, CL-ML	*A-6, A-4	0	0	100	95-100	90-10
	38-95	*Silty clay loam, silt loam	*CL	*A-6, A-4	0	0	85-100	84-100	71-10
202: Rock outcrop-----	0-60	*Unweathered bedrock			---	---	---	---	---
	0-4	*Coarse sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4	0	0	95-100	85-100	50-65
	4-9	*Coarse sandy loam, gravelly loamy coarse sand, sandy loam	*SM, SC-SM	*A-1, A-2	0	0-15	85-100	70-90	40-55
	9-15	*Gravelly loamy coarse sand, loamy coarse sand, gravelly loamy sand	*SM, SW-SM	*A-1	0	0-35	80-95	65-85	30-50
	15-25	*Unweathered bedrock			---	---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-13	*Loam	*CL-ML, CL	*A-4	0	0	100	90-100	70-90
	13-25	*Gravelly loam, gravelly coarse sandy loam, loamy sand	*SC-SM, SC, SM	*A-4, A-1, A-2	0	0-15	80-100	60-90	40-75
	25-33	*Gravelly sandy loam, very gravelly loamy sand	*SC-SM, SC, SP-SM, SW-SC, SM	*A-1, A-2	0	0-20	60-90	40-75	30-55
	33-43	*Weathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
203: Scaler-----	In				Pct	Pct			
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-2	*Ashy silt loam	*ML			0	0	100	100
	2-11	*Ashy silt loam	*ML			0	0	100	95-100
	11-18	*Silt loam, loam	*CL-ML, CL			0	0	100	95-100
	18-30	*Silt loam	*CL, CL-ML			0	0	95-100	90-100
	30-40	*Silt loam, gravelly silt loam, silty clay loam, loam	*CL, CL-ML			0	0-8	90-100	75-100
	40-48	*Paragravelly loam, loamy sand, gravelly sandy clay loam	*CL-ML, GC-GM, CL			0	0-17	62-100	61-100
	48-65	*Very paragravelly loamy sand, very gravelly sandy loam, sandy loam	*SC-SM, SM, SC			0	0	70-100	60-100
204: Scaler-----	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-2	*Ashy silt loam	*ML			0	0	100	100
	2-11	*Ashy silt loam	*ML			0	0	100	95-100
	11-18	*Silt loam, loam	*CL-ML, CL			0	0	100	95-100
	18-30	*Silt loam	*CL, CL-ML			0	0	95-100	90-100
	30-40	*Silt loam, gravelly silt loam, silty clay loam, loam	*CL, CL-ML			0	0-8	90-100	75-100
	40-48	*Paragravelly loam, loamy sand, gravelly sandy clay loam	*CL-ML, GC-GM, CL			0	0-17	62-100	61-100
	48-65	*Very paragravelly loamy sand, very gravelly sandy loam, sandy loam	*SC-SM, SM, SC			0	0	70-100	60-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
204: Grandad-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4	0	0	100	100	98-10
	3-19	*Ashy silt loam, ashy loam	*ML	*A-4, A-5	0	0	91-100	91-100	89-10
	19-30	*Loam, sandy loam, gravelly loam	*CL, CL-ML	*A-4	0	0	77-100	76-100	70-10
	30-39	*Gravelly loam, loam, fine sandy loam	*CL, GC-GM	*A-4	0-9	0-17	65-91	63-91	59-91
	39-45	*Gravelly loam, cobbly sandy loam, loam	*CL-ML, CL, GC-GM	*A-4	0-9	0-17	72-91	71-91	69-91
	45-58	*Loam, sandy loam, cobbly sandy loam	*CL-ML, SM, CL	*A-4	0-8	0-8	75-92	74-91	68-91
	58-64	*Paragravelly sandy loam, cobbly sandy loam, gravelly loamy sand, sandy loam, loam	*SC-SM, SM, SC	*A-2, A-4, A-1	0-8	0-16	65-92	64-91	45-79
205: Scaler-----	0-1	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-2	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	100	90-10
	2-11	*Ashy silt loam	*ML	*A-4, A-5	0	0	100	95-100	90-10
	11-18	*Silt loam, loam	*CL-ML, CL	*A-4	0	0	100	95-100	85-10
	18-30	*Silt loam	*CL, CL-ML	*A-4	0	0	95-100	90-100	85-10
	30-40	*Silt loam, gravelly silt loam, silty clay loam, loam	*CL, CL-ML	*A-4, A-6	0	0-8	90-100	75-100	75-10
	40-48	*Paragravelly loam, loamy sand, gravelly sandy clay loam	*CL-ML, GC-GM, CL	*A-4, A-6	0	0-17	62-100	61-100	60-10
	48-65	*Very paragravelly loamy sand, very gravelly sandy loam, sandy loam	*SC-SM, SM, SC	*A-2, A-1, A-4	0	0	70-100	60-100	45-70

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	Pct	inches		
							4	10	40
205: Grangemont-----	In					Pct			
	0-2	*Slightly decomposed plant material	*PT						
	2-3	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	3-7	*Ashy silt loam	*ML, OH						
	7-14	*Ashy silt loam, ashy loam	*ML		0	0	100	100	60-10
	14-38	*Silt loam, silty clay loam	*CL, CL-ML		0	0	100	100	90-10
	38-95	*Silty clay loam, silt loam	*CL		0	0	85-100	84-100	71-10
206: Scand-----	0-1	*Slightly decomposed plant material	*PT						
	1-4	*Ashy silt loam	*ML, MH		0	0	100	100	60-10
	4-16	*Ashy silt loam	*ML		0	0	100	100	90-10
	16-27	*Silt loam, loam	*CL, CL-ML		0	0	95-100	85-100	80-95
	27-53	*Loam, silt loam, sandy clay loam	*CL, CL-ML		0	0	95-100	85-100	70-90
	53-63	*Loamy sand, loam, gravelly sandy loam	*SC, SC-SM		0	0	77-100	76-100	53-85
Scaler-----	0-1	*Moderately decomposed plant material	*PT						
	1-2	*Ashy silt loam	*ML		0	0	100	100	60-10
	2-11	*Ashy silt loam	*ML		0	0	100	100	90-10
	11-18	*Silt loam, loam	*CL-ML, CL		0	0	100	95-100	90-10
	18-30	*Silt loam	*CL, CL-ML		0	0	95-100	90-100	85-10
	30-40	*Silt loam, gravelly silt loam, silty clay loam, loam	*CL, CL-ML		0	0-8	90-100	75-100	75-10
	40-48	*Paragravelly loam, loamy sand, gravelly sandy clay loam	*CL-ML, GC-GM, CL		0	0-17	62-100	61-100	60-10
	48-65	*Very paragravelly loamy sand, very gravelly sandy loam, sandy loam	*SC-SM, SM, SC		0	0	70-100	60-100	45-70

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
207: Seddw-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-3	*Ashy silt loam	*ML			0	0	85-100	75-100
	3-5	*Ashy silt loam	*ML			0	0	95-100	90-100
	5-13	*Ashy silt loam	*CL, CL-ML			0	0	68-100	66-100
	13-35	*Silt loam, gravelly silty clay loam,	*CL, GC-GM, CL-ML			0	0	65-95	60-90
	35-44	*Very gravelly silt loam, extremely gravelly clay loam,	*GC, GM, CL			0	0-35	35-75	30-65
	44-54	*Unweathered bedrock			---	---	---	---	---
208: Seddw-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	60-100
	1-3	*Ashy silt loam	*ML			0	0	85-100	75-100
	3-5	*Ashy silt loam	*ML			0	0	95-100	90-100
	5-13	*Ashy silt loam,	*CL, CL-ML			0	0	68-100	66-100
	13-35	*Silt loam, gravelly silty clay loam,	*CL, GC-GM, CL-ML			0	0	65-95	60-90
	35-44	*Very gravelly silt loam, extremely gravelly clay loam,	*GC, GM, CL			0	0-35	35-75	30-65
	44-54	*Unweathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
209: Seddow-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML			0	0	85-100	75-100
	3-5	*Ashy silt loam	*ML			0	0	95-100	90-100
	5-13	*Ashy silt loam, gravelly ashy loam	*CL, CL-ML	A-6		0	0	68-100	66-100
	13-35	*Silt loam, gravelly silty clay loam, gravelly loam	*CL, GC-GM, CL-ML	A-4, A-7		0	0	65-95	60-90
	35-44	*Very gravelly silt loam, extremely gravelly clay loam, gravelly clay loam	*GC, GM, CL	A-6, A-7, A-2		0	0-35	35-75	30-65
	44-54	*Unweathered bedrock			---	---	---	---	---
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-15	*Silt loam	*CL, ML			0	0	95-100	85-100
210: Setters-----	15-28	*Silt loam	*CL, CL-ML	A-6		0	0	95-100	90-100
	28-34	*Silt loam, silt	*CL, CL-ML	A-4		0	0	95-100	90-100
	34-62	*Silty clay, silty clay loam, cobbly clay loam	*CH	A-7	0-15	0-35	80-100	70-100	70-100
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-15	*Silt loam	*CL, ML			0	0	95-100	85-100
	15-28	*Silt loam	*CL, CL-ML	A-6		0	0	95-100	90-100
	28-34	*Silt loam, silt	*CL, CL-ML	A-4		0	0	95-100	90-100
	34-62	*Silty clay, silty clay loam, cobbly clay loam	*CH	A-7	0-15	0-35	80-100	70-100	70-100
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML, MH			0	0	90-100	85-100
211: Shattuck-----	7-19	*Ashy silt loam, ashy loam, gravelly ashy loam	*ML	A-4		0	0	80-100	75-100
	19-30	*Gravelly clay loam	*CL, GC			0	0	54-73	52-72
	30-63	*Extremely cobbly clay loam	*GC	A-2, A-7	0-21	37-55	28-68	25-66	22-63
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML, MH			0	0	90-100	85-100
	7-19	*Ashy silt loam, ashy loam, gravelly ashy loam	*ML	A-4		0	0	80-100	75-100
	19-30	*Gravelly clay loam	*CL, GC			0	0	54-73	52-72
	30-63	*Extremely cobbly clay loam	*GC	A-2, A-7	0-21	37-55	28-68	25-66	22-63
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML, MH			0	0	90-100	85-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
212: Shattuck-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	90-100	85-100
	7-19	*Ashy silt loam, ashy loam, gravelly ashy loam	*ML	*A-5, A-4		0	0	80-100	75-100
	19-30	*Gravelly clay loam	*CL, GC	*A-6, A-4, A-7		0	0	54-73	52-72
	30-63	*Extremely cobbly clay loam	*GC	*A-2, A-7	0-21	37-55		28-68	25-66
213: Shattuck, moist	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	90-100	85-100
	7-19	*Ashy silt loam, ashy loam, gravelly ashy loam	*ML	*A-5, A-4		0	0	80-100	75-100
	19-30	*Gravelly clay loam	*CL, GC	*A-6, A-4, A-7		0	0	54-73	52-72
	30-63	*Extremely cobbly clay loam	*GC	*A-2, A-7	0-21	37-55		28-68	25-66
214: Shattuck, moist	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-7	*Ashy silt loam	*ML, MH	*A-5, A-4		0	0	90-100	85-100
	7-19	*Ashy silt loam, ashy loam, gravelly ashy loam	*ML	*A-5, A-4		0	0	80-100	75-100
	19-30	*Gravelly clay loam	*CL, GC	*A-6, A-4, A-7		0	0	54-73	52-72
	30-63	*Extremely cobbly clay loam	*GC	*A-2, A-7	0-21	37-55		28-68	25-66

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
214: Dworshak, moist	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT		0	0	100	100	60-10
	2-3	*Moderately decomposed plant material	*PT		0	0	100	100	60-10
	3-11	*Ashy silt loam	*ML, MH		0	0	100	100	90-10
	11-18	*Ashy silt loam, ashy loam	*ML, MH		0	0	100	100	90-10
	18-31	*Silt loam, gravelly clay loam	*CL		0	0	68-100	67-100	65-10
215: Shattuck-----	31-63	*Very gravelly clay loam, gravelly clay loam	*GC, CL		0	9-39	45-74	43-73	37-73
	0-2	*Slightly decomposed plant material	*PT			0	100	100	60-10
	2-7	*Ashy silt loam	*ML, MH		0	0	90-100	85-100	80-10
	7-19	*Ashy silt loam, ashy loam, gravelly ashy loam	*ML		0	0	80-100	75-100	70-10
	19-30	*Gravelly clay loam	*CL, GC		0	0	54-73	52-72	45-72
	30-63	*Extremely cobbly clay loam	*GC		0-21	37-55	28-68	25-66	22-63
Dworshak-----	0-2	*Slightly decomposed plant material	*PT			0	100	100	60-10
	2-3	*Moderately decomposed plant material	*PT			0	100	100	60-10
	3-11	*Ashy silt loam	*ML, MH		0	0	100	100	90-10
	11-18	*Ashy silt loam, ashy loam	*ML, MH		0	0	100	100	90-10
	18-31	*Silt loam, gravelly clay loam	*CL		0	0	68-100	67-100	65-10
	31-63	*Very gravelly clay loam, gravelly clay loam	*GC, CL		0	9-39	45-74	43-73	37-73



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
216: Sly-----	In				Pct	Pct			
	0-4	*Slightly decomposed plant material	*PT			0	0	100	100
	4-8	*Ashy silt loam							
			*CL-ML, CL, ML	*A-4		0	0	90-100	85-100
	8-19	*Ashy silt loam, ash silty clay loam	*CL, ML	*A-4, A-6		0	0	90-100	85-100
	19-28	*Silty clay loam, silt loam, loam	*CL	*A-6, A-7		0	0	70-100	60-100
	28-37	*Silty clay loam, gravelly silty clay loam	*CL	*A-7, A-6		0	0	70-100	60-100
Wilkins-----	37-66	*Cobbly clay loam, loam, gravelly loam	*CL, GC	*A-6, A-7, A-4		0	0-25	72-100	71-100
	0-15	*Silt loam	*CL	*A-6, A-4		0	0	100	100
	15-20	*Silt loam	*CL, CL-ML	*A-4		0	0	100	100
	20-52	*Silty clay	*CH	*A-7		0	0	100	100
	52-64	*Clay loam, silty clay loam	*CH, CL	*A-7		0	0	95-100	85-100
217: Southwick-----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100
	1-17	*Silt loam							
	17-26	*Silt loam, silt	*CL, CL-ML	*A-4, A-6		0	0	100	100
	26-61	*Silty clay loam, silt loam	*CL, CL-ML	*A-4, A-6		0	0	100	100
			*CL	*A-6, A-7		0	0	95-100	90-100
218: Southwick-----	0-9	*Silt loam							
	9-26	*Silt loam	*ML, CL	*A-7, A-6		0	0	100	100
	26-32	*Silt loam	*CL	*A-6, A-7		0	0	100	100
	32-46	*Silty clay loam	*CL, CL-ML	*A-4, A-6		0	0	100	100
	46-64	*Silty clay loam	*CL, ML	*A-7, A-6		0	0	100	100
			*CL, ML	*A-7, A-6		0	0	95-100	86-100
	0-19	*Silt loam	*ML, CL	*A-6, A-7, A-4		0	0	100	100
Larkin-----	19-61	*Silty clay loam, silt loam	*CL	*A-6, A-4		0	0	100	100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
219: Statemeadow-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Ashy silt loam	*CL-ML, ML			0	0	100	100
	2-9	*Ashy silt loam, ashy loam	*CL	*A-4, A-6		0	0	100	100
	9-51	*Silt loam, silty clay loam, paragravelly	*CL	*A-6, A-7, A-4		0	0	100	100
	51-61	*Silty clay loam, silt loam, paragravelly silty clay loam	*CL, CH	*A-6, A-4, A-7		0	0	100	100
Reggear-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-8	*Ashy silt loam	*ML	*A-4		0	0	100	100
	8-13	*Ashy silt loam	*ML, CL, CL-ML	*A-4, A-6		0	0	100	100
	13-22	*Silt loam	*CL, CL-ML	*A-4, A-6		0	0	100	100
	22-31	*Silt loam, silty clay loam	*CL	*A-6, A-4		0	0	100	100
	31-60	*Silt loam, clay, silty clay loam	*CL, CH	*A-6, A-7		0	0	100	100
220: Swayne-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-8	*Silt loam	*CL	*A-6, A-4		0	0	100	100
	8-14	*Silty clay loam, silt loam, loam	*CL	*A-7, A-6		0	0	100	100
	14-22	*Silty clay loam, silt loam, loam	*CL, CH	*A-7, A-6		0	0	100	100
	22-56	*Silty clay loam, silty clay, clay loam	*CH, CL	*A-7, A-6		0	0	95-100	85-100
	56-61	*Clay loam, silty clay loam, clay	*CH	*A-7		0	0	95-100	85-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4		
							10	10	40
221: Taney-----	In				Pct	Pct			
	0-10	*Ashy silt loam	*CL, CL-ML	*A-4	0	0	100	100	95-10
	10-31	*Silt loam	*CL-ML, CL, ML	*A-4	0	0	100	100	95-10
	31-60	*Silty clay loam	*CL	*A-6, A-4, A-7	0	0	100	100	95-10
222: Taney-----	0-14	*Ashy silt loam	*CL	*A-6, A-4	0	0	100	100	96-10
	14-23	*Silt loam	*CL	*A-6, A-4	0	0	100	100	95-10
	23-29	*Silt loam	*CL-ML, CL	*A-4	0	0	100	100	95-10
	29-36	*Silty clay loam, silt loam	*CL	*A-6, A-7	0	0	100	100	95-10
	36-63	*Silty clay, silty clay loam	*CH, CL	*A-7, A-6	0	0	100	100	95-10
	0-18	*Silt loam	*CL	*A-6, A-4	0	0	100	100	96-10
Joel-----	18-24	*Silt loam	*CL	*A-6, A-4	0	0	100	100	96-10
	24-60	*Silty clay loam, silt loam	*CL	*A-6, A-7	0	0	100	100	93-10
	0-10	*Ashy silt loam	*CL, CL-ML	*A-4	0	0	100	100	95-10
	10-31	*Silt loam	*CL-ML, CL, ML	*A-4	0	0	100	100	95-10
223: Taney-----	31-60	*Silty clay loam	*CL	*A-6, A-4, A-7	0	0	100	100	95-10
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-15	*Gravelly silt loam, silt loam	*GM, ML, GC, GC-GM	*A-4	0	0-8	65-95	60-90	55-80
McCrosket-----	15-35	*Extremely cobbly loam, very gravelly silt loam, very gravelly loam, very gravelly sandy loam	*GC-GM, GC	*A-2, A-6, A-1, A-4	0-10	10-65	35-75	30-55	25-50
	35-48	*Extremely cobbly loam, extremely gravelly loam, very cobbly sandy loam	*GC-GM, GC, GM	*A-2, A-6, A-1, A-4	0-10	10-65	35-60	25-50	20-45
	48-58	*Weathered bedrock			---	---	---	---	---

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number						
			Unified	AASHTO	>10 inches	Pct	Pct	4	10	40			
224: Taney	In												
	0-10	*Ashy silt loam	*CL, CL-ML	*A-4	0	0	100	100	95-10	95-10			
	10-31	*Silt loam	*CL-ML, CL, ML	*A-4	0	0	100	100	95-10	95-10			
	31-60	*Silty clay loam	*CL	*A-6, A-4, A-7	0	0	100	100	95-10	95-10			
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10	60-10			
	2-15	*Silt loam	*CL, ML	*A-4, A-6	0	0	95-100	85-100	80-10	80-10			
	15-28	*Silt loam	*CL, CL-ML	*A-4, A-6	0	0	95-100	90-100	85-10	85-10			
	28-34	*Silt loam, silt	*CL, CL-ML	*A-4	0	0	95-100	90-100	85-10	85-10			
	34-62	*Silty clay, silty clay loam, cobbly clay loam	*CH	*A-7	0-15	0-35	80-100	70-100	70-10	70-10			
	0-10	*Ashy silt loam	*CL, CL-ML	*A-4	0	0	100	100	95-10	95-10			
225: Taney	10-31	*Silt loam	*CL-ML, CL, ML	*A-4	0	0	100	100	95-10	95-10			
	31-60	*Silty clay loam	*CL	*A-6, A-4, A-7	0	0	100	100	95-10	95-10			
	0-2	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10	60-10			
	2-15	*Silt loam	*CL, ML	*A-4, A-6	0	0	95-100	85-100	80-10	80-10			
	15-28	*Silt loam	*CL, CL-ML	*A-4, A-6	0	0	95-100	90-100	85-10	85-10			
	28-34	*Silt loam, silt	*CL, CL-ML	*A-4	0	0	95-100	90-100	85-10	85-10			
	34-62	*Silty clay, silty clay loam, cobbly clay loam	*CH	*A-7	0-15	0-35	80-100	70-100	70-10	70-10			
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10	60-10			
	1-13	*Ashy silt loam	*CL, ML	*A-6, A-7	0	0	90-100	85-100	75-95	75-95			
	13-23	*Silty clay loam, silt loam, gravelly loam	*CL	*A-7, A-6	0	0	80-100	70-100	65-95	65-95			
226: Teakean	23-42	*Gravelly clay loam, silt loam, clay loam	*CL, CH	*A-7, A-6	0	0	85-100	75-100	65-95	65-95			
	42-61	*Gravelly clay loam, gravelly silty clay loam, clay loam	*CL, CH, GC	*A-7, A-6	0	0	65-90	55-85	50-80	50-80			

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
227: Teneb-----	In				Pct	Pct			
	0-7	*Ashy silt loam	*CL	*A-4, A-6	0	0	100	100	90-10
	7-24	*Silty clay loam, silt loam, silty clay	*CL, CH	*A-7, A-4, A-6	0	0	100	100	95-10
	24-34	*Silt loam, silty clay loam, loam	*CL	*A-6	0	0	100	100	90-10
	34-64	*Silty clay loam, loam, silty clay	*CL, CH	*A-6, A-7, A-4	0	0	100	85-100	75-10
228: Texascreek-----	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-13	*Loam	*CL-ML, CL	*A-4	0	0	100	90-100	70-90
	13-25	*Gravelly loam, gravelly coarse sandy loam, loamy sand	*SC-SM, SC, SM	*A-4, A-1, A-2	0	0-15	80-100	60-90	40-75
	25-33	*Gravelly sandy loam, very gravelly loamy sand	*SC-SM, SC, SP-SM, SW-SC, SM	*A-1, A-2	0	0-20	60-90	40-75	30-55
	33-43	*Weathered bedrock			---	---	---	---	---
Rock outcrop----	0-60	*Unweathered bedrock			---	---	---	---	---
229: Texascreek, dry	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-13	*Loam	*CL-ML, CL	*A-4	0	0	100	90-100	70-90
	13-25	*Gravelly loam, gravelly coarse sandy loam, loamy sand	*SC-SM, SC, SM	*A-4, A-1, A-2	0	0-15	80-100	60-90	40-75
	25-33	*Gravelly sandy loam, very gravelly loamy sand	*SC-SM, SC, SP-SM, SW-SC, SM	*A-1, A-2	0	0-20	60-90	40-75	30-55
	33-43	*Weathered bedrock			---	---	---	---	---
Whiskeycreek----	0-4	*Coarse sandy loam	*SC-SM, SC, SM	*A-2, A-1, A-4	0	0	95-100	85-100	50-65
	4-9	*Coarse sandy loam, gravelly loamy coarse sand, sandy loam	*SM, SC-SM	*A-1, A-2	0	0-15	85-100	70-90	40-55
	9-15	*Gravelly loamy coarse sand, loamy coarse sand, gravelly loamy sand	*SM, SW-SM	*A-1	0	0-35	80-95	65-85	30-50
	15-25	*Unweathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
230: Norwidge-----	In				Pct	Pct			
	0-3	*Slightly decomposed plant material	*PT			0	0	100	100
	3-6	*Medial silt loam	*ML, OL			0	0	100	100
	6-17	*Medial silt loam	*ML			0	0	100	100
	17-26	*Silt loam	*CL-ML, ML, CL			0	0	100	95-100
	26-42	*Silty clay loam, silty clay loam	*CL			0	0	100	95-100
	42-81	*Silty clay loam, silty clay loam	*CL			0	0	90-100	85-85
Threebear-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Medial silt loam	*ML, MH			0	0	100	100
	3-18	*Medial silt loam	*ML			0	0	100	100
	18-26	*Silt loam	*CL			0	0	100	100
	26-40	*Silt loam, silty clay loam	*CL			0	0	100	95-100
	40-69	*Silty clay loam, silt loam, sandy clay loam	*CL			0	0	100	90-100
									85-10
231: Tomodo-----	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-3	*Ashy silt loam	*ML, MH			0	0	100	100
	3-20	*Ashy silt loam, ashy loam	*ML			0	0	100	100
	20-30	*Loam, silt loam, very fine sandy loam	*CL, CL-ML			0	0	100	95-100
	30-51	*Loam, clay loam, very fine sandy loam	*CL			0	0	100	90-100
	51-62	*Clay loam, silt loam, loam	*CL, CL-ML			0	0	100	90-100
	62-66	*Clay loam, loam, gravelly loam	*CL			0	0-8	75-100	65-95

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
232: Tomodo-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-3	*Ashy silt loam	*ML, MH			0	0	100	100
	3-20	*Ashy silt loam, ashy loam	*ML			0	0	100	100
	20-30	*Loam, silt loam, very fine sandy loam	*CL, CL-ML			0	0	100	95-100
	30-51	*Loam, clay loam, very fine sandy loam	*CL			0	0	100	90-100
	51-62	*Clay loam, silt loam, loam	*CL, CL-ML			0	0	100	90-100
	62-66	*Clay loam, loam, gravelly loam	*CL			0	0-8	75-100	85-100
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
233: Township-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-3	*Ashy silt loam	*ML, MH			0-5	0-10	90-100	85-100
	3-17	*Ashy silt loam, ashy loam	*ML			0	0-10	90-100	85-100
	17-35	*Very flaggy loam	*GC, CL, GC-GM			19-27	21-51	46-89	44-88
	35-43	*Very cobbly loam	*GC, CL			0-14	0-55	42-76	40-75
	43-53	*Extremely cobbly sandy loam	*GC, GP-GC			0-18	18-63	25-62	22-60
	53-66	*Extremely flaggy sandy loam	*GC, GP-GC, SC			24-34	19-43	29-100	26-100

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-						
			Unified	AASHTO	>10 inches	Pct	3-10 inches	4	10	40			
233: Rettig-----	In					Pct							
	0-1	*Moderately decomposed plant material	*PT				0	0	100	100	60-10		
	1-7	*Ashy loam	*ML				0	0	92-100	70-100	66-10		
	7-27	*Ashy loam, ashy silt loam	*ML				0	0	86-100	65-100	62-10		
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM				0	0	80-100	60-100	45-87		
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL			0-17	0-42	70-100	150-100	35-86			
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC			0-8	0-70	65-91	40-91	30-75			
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC			0	9-32	60-90	35-81	25-65			
	0-1	*Slightly decomposed plant material	*PT				0	0	100	100	60-10		
	1-3	*Ashy silt loam	*ML, MH			0-5	0-10	90-100	85-100	75-95			
234: Township-----	3-17	*Ashy silt loam, ashy loam	*ML			0	0-10	90-100	85-100	70-90			
	17-35	*Very flaggy loam	*GC, CL, GC-GM			19-27	21-51	46-89	44-88	35-84			
	35-43	*Very cobbly loam	*GC, CL			0-14	0-55	42-76	40-75	40-75			
	43-53	*Extremely cobbly sandy loam	*GC, GP-GC			0-18	18-63	25-62	22-60	16-52			
	53-66	*Extremely flaggy sandy loam	*GC, GP-GC, SC			24-34	19-43	29-100	26-100	19-81			



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-					
			Unified	AASHTO	inches	Pct	3-10		4	10	40	
234: Rettig-----	In					Pct	Pct					
	0-1	*Moderately decomposed plant material	*PT	*A-8		0	0	100	100	60-100		
	1-7	*Ashy loam	*ML	*A-5, A-4		0	0	92-100	70-100	66-100		
	7-27	*Ashy loam, ashy silt loam	*ML	*A-5, A-4		0	0	86-100	65-100	62-100		
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM	*A-2, A-4		0	0	80-100	60-100	45-87		
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL	*A-4, A-1, A-2		0-17	0-42	70-100	50-100	35-86		
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC	*A-2, A-4, A-1		0-8	0-70	65-91	40-91	30-75		
	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC	*A-1, A-4, A-2		0	9-32	60-90	35-81	25-65		
235: Township, dry----	0-1	*Slightly decomposed plant material	*PT	*A-8		0	0	100	100	60-100		
	1-3	*Ashy silt loam	*ML, MH	*A-5, A-4		0-5	0-10	90-100	85-100	75-95		
	3-17	*Ashy silt loam, ashy loam	*ML	*A-5, A-4		0	0-10	90-100	85-100	70-90		
	17-35	*Very flaggy loam	*GC, CL, GC-GM	*A-6, A-1		19-27	21-51	46-89	44-88	35-84		
	35-43	*Very cobbly loam	*GC, CL	*A-4, A-6, A-2		0-14	0-55	42-76	40-75	40-75		
	43-53	*Extremely cobbly sandy loam	*GC, GP-GC	*A-2, A-1		0-18	18-63	25-62	22-60	16-52		
	53-66	*Extremely flaggy sandy loam	*GC, GP-GC, SC	*A-2, A-6		24-34	19-43	29-100	26-100	19-81		

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
235: Rettig, low precipitation--	In				Pct	Pct			
	0-1	*Moderately decomposed plant material	*PT			0	0	100	100
	1-7	*Ashy loam	*ML			0	0	92-100	70-100
	7-27	*Ashy loam, ashy silt loam	*ML			0	0	86-100	65-100
	27-34	*Gravelly sandy loam, loam, fine sandy loam	*SC-SM, CL, SM			0	0	80-100	60-100
	34-47	*Gravelly sandy loam, cobbly loam, very gravelly loam, channery sandy loam	*SC-SM, SM, CL		0-17	0-42	70-100	50-100	35-86
	47-63	*Gravelly sandy loam, cobbly sandy loam, very channery loamy sand, very paragravelly sandy loam	*SC-SM, SM, SC		0-8	0-70	65-91	40-91	30-75
Nakarna, dry----	63-66	*Very gravelly sandy loam, coarse sandy loam, very paragravelly loamy sand	*SC-SM, SM, SC		0	9-32	60-90	35-81	25-65
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-5	*Ashy silt loam	*ML, MH			0	0	72-100	71-100
	5-15	*Ashy silt loam, ashy loam	*ML, MH			0	0	72-100	71-100
	15-34	*Gravelly loam, cobbly loam, silt loam, sandy loam	*ML, CL, CL-ML, GM		0	0-25	65-100	64-100	60-10
	34-42	*Gravelly sandy loam, loamy sand, very cobbly sandy loam	*SM, GM, SC-SM		0	0-24	53-91	52-91	44-89
	42-52	*Weathered bedrock			---	---	---	---	---

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
236: Trappercreek-----	In				Pct	Pct			
	0-4	*Slightly decomposed plant material	*PT			0	0	100	100
	4-8	*Medial silt loam	*ML, MH			0	0	100	100
	8-19	*Medial silt loam, medial loam	*ML, MH			0	0	100	100
	19-32	*Silt loam, silty clay loam, loam	*CL			0	0	100	100
	32-46	*Silt loam, loam, silty clay loam	*CL, CL-ML			0	0	100	95-100
	46-60	*Silty clay loam, clay loam	*CL			0	0	100	90-100
	60-79	*Silty clay loam, silt loam, loam	*CL			0	0	100	90-100
	79-85	*Silt loam, loam	*CL-ML, CL, SC-SM			0	0	75-100	70-100
									65-100
Narnett-----	0-9	*Medial silt loam	*ML			0	0	100	95-100
	9-15	*Silt loam, loam	*CL			0	0	100	95-100
	15-50	*Silt loam, clay loam, loam	*CL			0	0-8	95-100	85-100
	50-58	*Silt loam, gravelly loam, clay loam	*CL			0	0-16	71-100	69-100
	58-80	*Very gravelly silt loam, loam, gravelly sand	*CL, GC-GM			0	0-8	57-92	55-91
									48-91
237: Uvi-----	0-1	*Moderately decomposed plant material	*PT				0	100	100
	1-8	*Ashy loam, ashy silt loam	*ML			0	0	95-100	95-100
	8-44	*Loam, sandy loam	*CL, CL-ML			0	0	85-100	85-100
	44-61	*Paragravelly sandy loam, gravelly loamy sand, loam, sandy loam	*SC, SC			0	0	78-100	77-100
									51-82

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
238: Uvi-----	0-4	*Ashy silt loam	*ML, CL	*A-6, A-7, A-4	0	0-5	94-100	77-100	70-97
	4-55	*Loam, sandy loam	*CL, SC-SM, CL-ML	*A-4, A-6, A-2	0	0	95-100	73-100	62-92
	55-65	*Very gravelly loam, very gravelly sandy loam	*SC-SM, SM	*A-2, A-4, A-1	0	0	78-83	41-74	35-67
239: Vaywood, high precipitation--	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	1-2	*Moderately decomposed plant material	*PT	*A-8	0	0	100	100	60-10
	2-7	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	90-100	85-100	80-95
	7-15	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	15-20	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	20-25	*Very cobbly loam, cobbly sandy loam, extremely gravelly loam	*SC-SM, GC-GM, GC	*A-2, A-4, A-1	0	0-49	55-85	25-70	20-65
	25-38	*Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly loamy sand, very gravelly loam	*GC-GM, GW-GC, SC-SM, SC	*A-1, A-2	0	0-50	40-85	30-50	20-45
	38-47	*Gravelly sandy loam, extremely gravelly loamy sand, cobbly sandy loam	*SM, GP-GM, GW-GM, SC-SM	*A-2, A-4, A-1	0	15-60	50-85	25-70	20-70
	47-62	*Gravelly sandy loam, extremely gravelly loamy sand, extremely cobbly loamy sand	*SM, SC-SM, GW-GM	*A-2, A-1	0	0-60	50-90	30-75	20-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
239: Vaywood, dry----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	90-100	85-100	80-95
	7-15	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	15-20	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	20-25	*Very cobbly loam, cobbly sandy loam, extremely gravelly loam	*SC-SM, GC-GM, GC	*A-2, A-4, A-1	0	0-49	55-85	25-70	20-65
	25-38	*Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly loamy sand, very gravelly loam	*GC-GM, GW-GC, SC-SM, SC	*A-1, A-2	0	0-50	40-85	30-50	20-45
	38-47	*Gravelly sandy loam, extremely gravelly loamy sand, cobbly sandy loam	*SM, GP-GM, GW-GM, SC-SM	*A-2, A-4, A-1	0	15-60	50-85	25-70	20-70
	47-62	*Gravelly sandy loam, extremely gravelly loamy sand, extremely cobbly loamy sand	*SM, SC-SM, GW-GM	*A-2, A-1	0	0-60	50-90	30-75	20-65

Table 26.—Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number—		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	<i>In</i>				<i>Pct</i>	<i>Pct</i>			
240: Vaywood-----	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	0	90-100	85-100
	7-15	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	15-20	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	20-25	*Very cobbly loam, cobbly sandy loam, extremely gravelly loam	*SC-SM, GC-GM, GC	*A-2, A-4, A-1	0	0-49	55-85	25-70	20-65
	25-38	*Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly loamy sand, very gravelly loam	*GC-GM, GW-GC, SC-SM, SC	*A-1, A-2	0	0-50	40-85	30-50	20-45
	38-47	*Gravelly sandy loam, extremely gravelly loamy sand, cobbly sandy loam	*SM, GP-GM, GW-GM, SC-SM	*A-2, A-4, A-1	0	15-60	50-85	25-70	20-70
	47-62	*Gravelly sandy loam, extremely gravelly loamy sand, extremely cobbly loamy sand	*SM, SC-SM, GW-GM	*A-2, A-1	0	0-60	50-90	30-75	20-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
241: Vaywood-----	In				Pct	Pct			
	0-1	*Slightly decomposed plant material	*PT			0	0	100	100
	1-2	*Moderately decomposed plant material	*PT			0	0	100	100
	2-7	*Medial silt loam	*ML, MH	*A-5, A-4	0	0	0	90-100	85-100
	7-15	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	15-20	*Medial silt loam, medial loam	*ML, MH	*A-5, A-4	0	0-8	80-100	75-90	65-90
	20-25	*Very cobbly loam, cobbly sandy loam, extremely gravelly loam	*SC-SM, GC-GM, GC	*A-2, A-4, A-1	0	0-49	55-85	25-70	20-65
	25-38	*Very cobbly sandy loam, extremely cobbly sandy loam, extremely gravelly loamy sand, very gravelly loam	*GC-GM, GW-GC, SC-SM, SC	*A-1, A-2	0	0-50	40-85	30-50	20-45
	38-47	*Gravelly sandy loam, extremely gravelly loamy sand, cobbly sandy loam	*SM, GP-GM, GW-GM, SC-SM	*A-2, A-4, A-1	0	15-60	50-85	25-70	20-70
	47-62	*Gravelly sandy loam, extremely gravelly loamy sand, extremely cobbly loamy sand	*SM, SC-SM, GW-GM	*A-2, A-1	0	0-60	50-90	30-75	20-65

Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
241: Handoff-----	In				Pct	Pct			
	0-2	*Slightly decomposed plant material	*PT			0	0	100	100
	2-11	*Medial loam	*OL, OH, ML	*A-5, A-4		0	0	90-100	85-95
	11-22	*Medial loam, medial silt loam	*ML, OH	*A-5, A-4		0	0	85-95	80-95
	22-30	*Gravelly medial loam, medial loam, very cobbly medial loam	*ML, MH, GM	*A-4, A-5		0	0-45	60-95	55-90
	30-45	*Very gravelly loam, very gravelly sandy loam, extremely cobbly fine sandy loam	*GC, GW-GC, SC-SM, SC	*A-2, A-4		0-10	0-70	35-75	30-60
	45-54	*Extremely gravelly sandy loam, very gravelly sandy loam, extremely cobbly sandy loam	*GC-GM, GP-GM, SC-SM	*A-1		0-15	15-70	35-60	25-50
	54-64	*Extremely cobbly loamy coarse sand, extremely gravelly loam	*GW-GM, GC-GM, GM	*A-1		10-15	30-75	30-60	25-50
	---	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---	---
242: Water-----	0-6	*Silt loam	*CL	*A-6		0	0	90-100	85-100
	6-14	*Gravelly silty clay loam, very gravelly clay loam	*CH, GC, CL	*A-7, A-2, A-6		0	0-40	45-80	45-75
	14-41	*Very cobbly silty clay loam, extremely cobbly clay, very gravelly silty clay	*GC	*A-7, A-2		0	0-75	30-60	30-55
	41-51	*Unweathered bedrock				---	---	---	---
	---	---	---	---	---	---	---	---	---
243: Wellsbench-----	0-6	*Silt loam	*CL	*A-6		0	0	90-100	85-100
	6-14	*Gravelly silty clay loam, very gravelly clay loam	*CH, GC, CL	*A-7, A-2, A-6		0	0-40	45-80	45-75
	14-41	*Very cobbly silty clay loam, extremely cobbly clay, very gravelly silty clay	*GC	*A-7, A-2		0	0-75	30-60	30-55
	41-51	*Unweathered bedrock				---	---	---	---
	---	---	---	---	---	---	---	---	---



Table 26.-Engineering Properties-Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
244: Wellsbench-----	In				Pct	Pct			
	0-6	*Silt loam	*CL	*A-6	0	0	90-100	85-100	75-90
	6-14	*Gravelly silty clay loam, very gravelly clay loam	*CH, GC, CL	*A-7, A-2, A-6	0	0-40	45-80	45-75	40-70
	14-41	*Very cobbly silty clay loam, extremely cobbly clay, very gravelly silty clay	*GC	*A-7, A-2	0	0-75	30-60	30-55	30-50
	41-51	*Unweathered bedrock			---	---	---	---	---
	0-1	*Slightly decomposed plant material	*PT	*A-8	0	0	100	100	60-10
Lacy-----	1-3	*Loam	*CL, SC	*A-6, A-4	0	0	86-96	72-96	61-88
	3-13	*Very cobbly clay loam, very cobbly loam	*SC, CL	*A-7, A-2	0	40-59	67-93	48-93	39-90
	13-16	*Extremely cobbly clay loam	*SC, CL, GC	*A-7, A-2	0	62-83	52-100	26-100	23-94
	16-26	*Unweathered bedrock			---	---	---	---	---
	0-15	*Silt loam	*CL	*A-6, A-4	0	0	100	100	95-10
	15-20	*Silt loam	*CL, CL-ML	*A-4	0	0	100	100	95-10
245: Wilkins-----	20-52	*Silty clay	*CH	*A-7	0	0	100	100	90-10
	52-64	*Clay loam, silty clay loam	*CH, CL	*A-7	0	0	100	95-100	85-10

Table 27.--Physical Properties

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility gro-  
erodibility index" apply only to the mineral or saturated organic surface layer. Absence of an  
data were not estimated.)

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
1: Agatha, very rocky----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-5	8-25	1.20-1.40	0.6-2	0.14-0.19	0.0-2.9	2.0-4.0	.32
	5-9	23-27	1.20-1.50	0.6-2	0.14-0.19	0.0-2.9	1.5-3.0	.17
	9-20	18-31	1.30-1.60	0.6-2	0.10-0.16	0.0-2.9	1.0-2.0	.15
	20-60	22-40	1.40-1.60	0.2-2	0.10-0.14	0.0-2.9	0.5-1.0	.10
	60-70	---	---	---	---	---	---	---
Rock outcrop-----	0-60	---	---	---	---	---	---	---
2: Agatha-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-5	8-25	1.20-1.40	0.6-2	0.14-0.19	0.0-2.9	2.0-4.0	.32
	5-9	23-27	1.20-1.50	0.6-2	0.14-0.19	0.0-2.9	1.5-3.0	.17
	9-20	18-31	1.30-1.60	0.6-2	0.10-0.16	0.0-2.9	1.0-2.0	.15
	20-60	22-40	1.40-1.60	0.2-2	0.10-0.14	0.0-2.9	0.5-1.0	.10
	60-70	---	---	---	---	---	---	---
3: Agatha-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-5	8-25	1.20-1.40	0.6-2	0.14-0.19	0.0-2.9	2.0-4.0	.32
	5-9	23-27	1.20-1.50	0.6-2	0.14-0.19	0.0-2.9	1.5-3.0	.17
	9-20	18-31	1.30-1.60	0.6-2	0.10-0.16	0.0-2.9	1.0-2.0	.15
	20-60	22-40	1.40-1.60	0.2-2	0.10-0.14	0.0-2.9	0.5-1.0	.10
	60-70	---	---	---	---	---	---	---
4: Ahsahka-----	0-6	16-23	1.30-1.50	0.6-2	0.15-0.18	0.0-2.9	2.0-5.0	.32
	6-16	17-33	1.30-1.50	0.6-2	0.15-0.18	0.0-2.9	1.0-3.0	.37
	16-35	18-36	1.20-1.40	0.2-2	0.16-0.21	3.0-5.9	0.5-1.0	.37
	35-60	30-60	1.25-1.50	0.06-0.6	0.14-0.20	6.0-8.9	0.0-0.5	.28
Fordcreek-----	0-6	15-25	1.30-1.50	2-6	0.14-0.18	0.0-2.9	2.0-5.0	.28
	6-16	16-30	1.20-1.40	0.2-2	0.15-0.21	3.0-5.9	0.5-3.0	.32
	16-27	15-37	1.25-1.50	0.2-2	0.14-0.20	0.0-5.9	0.0-1.0	.28
	27-41	8-35	1.25-1.50	0.2-2	0.08-0.20	0.0-5.9	0.0-1.0	.37
	41-51	---	---	---	---	---	---	---

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
5: Ahsahka-----	0-6	16-23	1.30-1.50	0.6-2	0.15-0.18	0.0-2.9	2.0-5.0	.32
	6-16	17-33	1.30-1.50	0.6-2	0.15-0.18	0.0-2.9	1.0-3.0	.37
	16-35	18-36	1.20-1.40	0.2-2	0.16-0.21	3.0-5.9	0.5-1.0	.37
	35-60	30-60	1.25-1.50	0.06-0.6	0.14-0.20	6.0-8.9	0.0-0.5	.28
Whiskeycreek-----	0-4	4-15	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	2.0-4.0	.24
	4-9	2-10	1.40-1.60	2-20	0.04-0.08	0.0-2.9	0.5-2.0	.32
	9-15	2-5	1.40-1.70	6-20	0.03-0.08	0.0-2.9	0.5-1.0	.15
	15-25	---	---	---	---	---	---	---
6: Aldermand-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-15	0.65-0.98	0.6-2	0.16-0.18	0.0-2.9	3.0-9.5	.28
	7-17	8-15	0.65-1.28	0.6-2	0.16-0.18	0.0-2.9	0.5-3.8	.37
	17-25	5-16	1.00-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-1.1	.32
	25-33	3-16	1.15-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-0.9	.28
	33-44	1-14	1.25-1.75	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	44-62	0-4	1.35-1.75	20-100	0.01-0.05	0.0-2.9	0.0-0.5	.05
7: Aldermand-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-15	0.65-0.98	0.6-2	0.16-0.18	0.0-2.9	3.0-9.5	.28
	7-17	8-15	0.65-1.28	0.6-2	0.16-0.18	0.0-2.9	0.5-3.8	.37
	17-25	5-16	1.00-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-1.1	.32
	25-33	3-16	1.15-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-0.9	.28
	33-44	1-14	1.25-1.75	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	44-62	0-4	1.35-1.75	20-100	0.01-0.05	0.0-2.9	0.0-0.5	.05
8: Aldermand, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-15	0.65-0.98	0.6-2	0.16-0.18	0.0-2.9	3.0-9.5	.28
	7-17	8-15	0.65-1.28	0.6-2	0.16-0.18	0.0-2.9	0.5-3.8	.37
	17-25	5-16	1.00-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-1.1	.32
	25-33	3-16	1.15-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-0.9	.28
	33-44	1-14	1.25-1.75	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	44-62	0-4	1.35-1.75	20-100	0.01-0.05	0.0-2.9	0.0-0.5	.05
9: Aquandic Cryaquepts---	0-8	10-18	1.20-1.45	0.6-6	0.11-0.21	0.0-2.5	2.0-4.0	.17
	8-18	12-22	1.20-1.40	0.6-2	0.16-0.21	0.0-3.0	1.0-3.0	.28
	18-27	6-18	1.20-1.50	0.6-6	0.06-0.21	0.0-3.0	1.0-2.0	.37
	27-54	6-20	1.25-1.60	0.6-20	0.05-0.20	0.0-3.0	0.5-1.0	.20
54-60	4-15	1.35-1.65		0.6-20	0.02-0.06	0.0-1.0	0.5-1.0	.10

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
10: Aquandic Endoaquepts--	0-10	8-18	1.15-1.60	0.6-2	0.16-0.21	0.0-3.0	1.0-5.0	.43
	10-52	8-24	1.15-1.65	0.2-0.6	0.11-0.21	0.0-3.0	1.0-2.0	.37
	52-60	1-19	1.15-2.00	0.6-6	0.01-0.21	0.0-3.0	1.0-2.0	.24
Aquandic Dystrudepts--	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-10	10-21	0.95-1.60	0.6-2	0.11-0.21	0.0-3.0	1.0-4.0	.20
	10-31	5-29	1.10-1.65	0.2-0.6	0.03-0.21	0.0-6.0	1.0-2.0	.05
	31-70	2-18	1.20-2.00	0.6-6	0.03-0.08	0.0-3.0	1.0-2.0	.02
11: Bandmill, dry-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	8-12	0.65-0.95	0.6-2	0.24-0.29	0.0-2.9	2.0-4.0	.37
	3-10	8-12	0.75-1.20	0.6-2	0.14-0.27	0.0-2.9	1.0-3.0	.55
	10-21	16-35	1.30-1.60	0.2-2	0.12-0.27	0.0-2.9	0.5-1.0	.49
	21-27	15-34	1.30-1.60	0.6-2	0.12-0.27	0.0-2.9	0.0-0.5	.49
	27-62	25-40	1.30-1.60	0.2-2	0.12-0.20	3.0-6.0	0.0-0.5	.43
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
Grangemont-----	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	8-10	0.65-0.90	2-6	0.20-0.24	0.0-2.9	3.0-7.0	.49
Bargamin-----	2-17	8-10	0.65-1.00	2-6	0.20-0.24	0.0-2.9	1.0-3.0	.55
	17-38	21-35	1.20-1.35	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.49
	38-65	30-48	1.30-1.50	0.06-0.2	0.17-0.20	6.0-8.9	0.0-0.5	.37
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	8-12	0.65-0.95	0.6-2	0.24-0.29	0.0-2.9	2.0-4.0	.37
	3-10	8-12	0.75-1.20	0.6-2	0.14-0.27	0.0-2.9	1.0-3.0	.55
12: Bandmill-----	10-21	16-35	1.30-1.60	0.2-2	0.12-0.27	0.0-2.9	0.5-1.0	.49
	21-27	15-34	1.30-1.60	0.6-2	0.12-0.27	0.0-2.9	0.0-0.5	.49
	27-62	25-40	1.30-1.60	0.2-2	0.12-0.20	3.0-6.0	0.0-0.5	.43
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
Riswold-----	9-17	8-16	0.90-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
13: Berthahill, moist-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	4-11	5-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.28
	11-20	5-12	0.65-1.00	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.32
	20-28	10-20	1.25-1.35	0.6-2	0.13-0.15	0.0-2.9	1.0-2.0	.10
	28-40	13-24	1.30-1.45	0.6-2	0.08-0.10	0.0-2.9	0.5-1.0	.15
	40-55	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	55-66	11-28	1.40-1.50	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.02
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	8-10	0.75-0.90	0.6-2	0.20-0.23	0.0-2.9	10-15	.37
14: Berthahill-----	11-22	8-10	0.85-0.95	0.6-2	0.20-0.22	0.0-2.9	6.0-10	.37
	22-30	12-16	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	1.0-4.0	.24
	30-45	16-20	1.40-1.50	0.6-2	0.08-0.10	0.0-2.9	0.5-1.0	.15
	45-54	10-14	1.45-1.55	2-6	0.07-0.08	0.0-2.9	0.0-0.5	.05
	54-64	5-14	1.50-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	4-11	5-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.28
	11-20	5-12	0.65-1.00	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.32
	20-28	10-20	1.25-1.35	0.6-2	0.13-0.15	0.0-2.9	1.0-2.0	.10
Handoff-----	28-40	13-24	1.30-1.45	0.6-2	0.08-0.10	0.0-2.9	0.5-1.0	.15
	40-55	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	55-66	11-28	1.40-1.50	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.02
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	8-10	0.75-0.90	0.6-2	0.20-0.23	0.0-2.9	10-15	.37
	11-22	8-10	0.85-0.95	0.6-2	0.20-0.22	0.0-2.9	6.0-10	.37
	22-30	12-16	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	1.0-4.0	.24
	30-45	16-20	1.40-1.50	0.6-2	0.08-0.10	0.0-2.9	0.5-1.0	.15
	45-54	10-14	1.45-1.55	2-6	0.07-0.08	0.0-2.9	0.0-0.5	.05
	54-64	5-14	1.50-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
15: Berthahill-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	4-11	5-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.28
	11-20	5-12	0.65-1.00	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.32
	20-28	10-20	1.25-1.35	0.6-2	0.13-0.15	0.0-2.9	1.0-2.0	.10
	28-40	13-24	1.30-1.45	0.6-2	0.08-0.10	0.0-2.9	0.5-1.0	.15
	40-55	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	55-66	11-28	1.40-1.50	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.02
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	8-10	0.75-0.90	0.6-2	0.20-0.23	0.0-2.9	10-15	.37

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
15: Shattuck-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-10	0.50-0.90	0.6-2	0.14-0.45	0.0-2.9	3.0-6.0	.43
	7-19	8-15	0.65-1.00	0.6-2	0.14-0.45	0.0-2.9	1.0-3.0	.55
	19-30	14-29	1.05-1.70	0.2-2	0.04-0.17	0.0-4.0	0.5-2.0	.24
	30-63	28-35	1.20-1.40	0.2-0.6	0.06-0.08	3.0-5.9	1.0-2.0	.10
16: Bigtalk, cool-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20
Bigtalk, wet-----	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37
17: Bigtalk-----	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28
18: Bigtalk, cool-----	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24
Floodwood, cool-----	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
Floodwood, cool-----	1-3	8-10	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-10	.32
	3-13	8-12	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.43
	13-35	15-26	1.40-1.65	0.2-0.6	0.13-0.18	0.0-2.9	0.5-1.0	.37
	35-55	12-20	1.40-1.60	0.2-0.6	0.10-0.16	0.0-2.9	0.3-0.8	.28
	55-63	5-19	1.40-1.60	2-20	0.05-0.11	0.0-2.9	0.0-0.5	.28

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
19: Bigtalk, cool-----	0-1	0-25	0.10-0.30					
	1-3	14-26	1.10-1.30	6-100	0.30-0.60	---	19-49	---
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	1.0-2.0	.28
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.5-1.0	.37
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.20
Keeler, cool-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15
20: Boulder creek, moist---	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-16	0.65-0.90	0.6-2	0.18-0.31	0.0-2.9	3.0-6.0	.32
	8-21	8-16	0.65-1.00	0.6-2	0.14-0.31	0.0-2.9	1.0-3.0	.43
	21-27	6-20	1.15-1.65	0.6-2	0.06-0.15	0.0-2.9	0.5-1.0	.24
	27-34	6-20	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	34-53	6-16	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
21: Boulder creek-----	53-69	2-14	1.20-1.70	2-6	0.04-0.12	0.0-2.9	0.1-0.5	.05
	0-2	3-9	0.65-0.85	0.6-2	0.19-0.21	0.0-2.9	3.0-10	.49
	2-15	3-9	0.65-0.85	0.6-2	0.14-0.21	0.0-2.9	1.0-3.0	.55
	15-26	3-9	1.30-1.50	0.6-6	0.04-0.11	0.0-2.9	0.0-0.5	.20
	26-60	2-5	1.40-1.60	2-6	0.03-0.05	0.0-2.9	0.0-0.5	.05
22: Boulder creek-----	0-2	3-9	0.65-0.85	0.6-2	0.19-0.21	0.0-2.9	3.0-10	.49
	2-15	3-9	0.65-0.85	0.6-2	0.14-0.21	0.0-2.9	1.0-3.0	.55
	15-26	3-9	1.30-1.50	0.6-6	0.04-0.11	0.0-2.9	0.0-0.5	.20
	26-60	2-5	1.40-1.60	2-6	0.03-0.05	0.0-2.9	0.0-0.5	.05
23: Boulder creek, moist---	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-16	0.65-0.90	0.6-2	0.18-0.31	0.0-2.9	3.0-6.0	.32
	8-21	8-16	0.65-1.00	0.6-2	0.14-0.31	0.0-2.9	1.0-3.0	.43
	21-27	6-20	1.15-1.65	0.6-2	0.06-0.15	0.0-2.9	0.5-1.0	.24
	27-34	6-20	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	34-53	6-16	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	53-69	2-14	1.20-1.70	2-6	0.04-0.12	0.0-2.9	0.1-0.5	.05

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
23: Brodeer-----								
	0-1	0-25	0.10-0.30		0.30-0.60		28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
24: Boulder creek-----								
	0-1	0-25	0.10-0.30		0.30-0.60	---	28-70	---
	1-8	8-16	0.65-0.90	0.6-2	0.18-0.31	0.0-2.9	3.0-6.0	.32
	8-21	8-16	0.65-1.00	0.6-2	0.14-0.31	0.0-2.9	1.0-3.0	.43
	21-27	6-20	1.15-1.65	0.6-2	0.06-0.15	0.0-2.9	0.5-1.0	.24
	27-34	6-20	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	34-53	6-16	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	53-69	2-14	1.20-1.70	2-6	0.04-0.12	0.0-2.9	0.1-0.5	.05
	0-1	0-25	0.10-0.30		0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
25: Boulder creek-----								
	0-1	0-25	0.10-0.30		0.30-0.60	---	28-70	---
	1-8	8-16	0.65-0.90	0.6-2	0.18-0.31	0.0-2.9	3.0-6.0	.32
	8-21	8-16	0.65-1.00	0.6-2	0.14-0.31	0.0-2.9	1.0-3.0	.43
	21-27	6-20	1.15-1.65	0.6-2	0.06-0.15	0.0-2.9	0.5-1.0	.24
	27-34	6-20	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	34-53	6-16	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	53-69	2-14	1.20-1.70	2-6	0.04-0.12	0.0-2.9	0.1-0.5	.05
	0-1	0-25	0.10-0.30		0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
26: Boulder creek, high precipitation-----								
	0-1	0-25	0.10-0.30		0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	8-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.37
	4-17	8-10	0.65-1.00	0.6-2	0.19-0.22	0.0-2.9	2.0-4.0	.49
	17-30	8-25	1.40-1.55	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.20
	30-52	2-12	1.45-1.60	2-20	0.04-0.10	0.0-2.9	0.0-0.5	.15
	52-62	---	---	---	---	---	---	---
	0-2	3-9	0.65-0.85	0.6-2	0.19-0.21	0.0-2.9	3.0-10	.49
	2-15	3-9	0.65-0.85	0.6-2	0.14-0.21	0.0-2.9	1.0-3.0	.55



Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
26: Marblecreek-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-5	3-9	0.65-0.95	0.6-2	0.14-0.16	0.0-2.9	3.0-8.0	.17
	5-13	3-9	0.65-0.95	0.6-2	0.13-0.16	0.0-2.9	1.0-3.0	.24
	13-27	3-9	1.30-1.50	0.6-6	0.04-0.11	0.0-2.9	0.5-1.0	.10
	27-46	3-9	1.40-1.60	2-6	0.03-0.05	0.0-2.9	0.0-0.5	.05
	46-62	0-5	1.40-1.60	2-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
27: Boulder creek, cool, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-16	0.65-0.90	0.6-2	0.18-0.31	0.0-2.9	3.0-6.0	.32
	8-21	8-16	0.65-1.00	0.6-2	0.14-0.31	0.0-2.9	1.0-3.0	.43
	21-27	6-20	1.15-1.65	0.6-2	0.06-0.15	0.0-2.9	0.5-1.0	.24
	27-34	6-20	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	34-53	6-16	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	53-69	2-14	1.20-1.70	2-6	0.04-0.12	0.0-2.9	0.1-0.5	.05
Rettig, cool-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
28: Brequito, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-5	8-12	0.65-0.95	0.6-2	0.20-0.24	0.0-2.9	3.0-6.0	.37
	5-11	8-12	0.75-1.20	0.6-2	0.20-0.24	0.0-2.9	1.0-3.5	.55
	11-20	16-27	1.30-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.5	.55
	20-37	18-32	1.35-1.65	0.2-2	0.19-0.21	3.0-5.9	0.5-1.0	.43
	37-67	5-28	1.20-1.40	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.43
29: Brequito-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-5	8-12	0.65-0.95	0.6-2	0.20-0.24	0.0-2.9	3.0-6.0	.37
	5-11	8-12	0.75-1.20	0.6-2	0.20-0.24	0.0-2.9	1.0-3.5	.55
	11-20	16-27	1.30-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.5	.55
	20-37	18-32	1.35-1.65	0.2-2	0.19-0.21	3.0-5.9	0.5-1.0	.43
	37-67	5-28	1.20-1.40	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.43

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
29: Grangemont-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
30: Brequito-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-5	8-12	0.65-0.95	0.6-2	0.20-0.24	0.0-2.9	3.0-6.0	.37
	5-11	8-12	0.75-1.20	0.6-2	0.20-0.24	0.0-2.9	1.0-3.5	.55
	11-20	16-27	1.30-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.5	.55
	20-37	18-32	1.35-1.65	0.2-2	0.19-0.21	3.0-5.9	0.5-1.0	.43
Lado, dry-----	37-67	5-28	1.20-1.40	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.43
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-10	0.65-0.95	2-6	0.21-0.28	0.0-2.9	2.0-8.0	.32
	4-20	8-18	0.65-1.00	2-6	0.21-0.30	0.0-2.9	1.0-4.0	.37
	20-48	17-34	1.30-1.60	0.2-2	0.16-0.21	3.0-5.9	1.0-2.0	.32
31: Brequito-----	48-64	15-31	1.25-1.60	0.6-2	0.16-0.21	0.0-2.9	0.0-0.5	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-5	8-12	0.65-0.95	0.6-2	0.20-0.24	0.0-2.9	3.0-6.0	.37
	5-11	8-12	0.75-1.20	0.6-2	0.20-0.24	0.0-2.9	1.0-3.5	.55
	11-20	16-27	1.30-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.5	.55
Lado, dry-----	20-37	18-32	1.35-1.65	0.2-2	0.19-0.21	3.0-5.9	0.5-1.0	.43
	37-67	5-28	1.20-1.40	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.43
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-10	0.65-0.95	2-6	0.21-0.28	0.0-2.9	2.0-8.0	.32
	4-20	8-18	0.65-1.00	2-6	0.21-0.30	0.0-2.9	1.0-4.0	.37
Lado, dry-----	20-48	17-34	1.30-1.60	0.2-2	0.16-0.21	3.0-5.9	1.0-2.0	.32
	48-64	15-31	1.25-1.60	0.6-2	0.16-0.21	0.0-2.9	0.0-0.5	.37

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
32: Brequito-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-5	8-12	0.65-0.95	0.6-2	0.20-0.24	0.0-2.9	3.0-6.0	.37
	5-11	8-12	0.75-1.20	0.6-2	0.20-0.24	0.0-2.9	1.0-3.5	.55
	11-20	16-27	1.30-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.5	.55
	20-37	18-32	1.35-1.65	0.2-2	0.19-0.21	3.0-5.9	0.5-1.0	.43
	37-67	5-28	1.20-1.40	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.43
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
33: Brequito-----	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
	48-68	2-24	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-5	8-12	0.65-0.95	0.6-2	0.20-0.24	0.0-2.9	3.0-6.0	.37
	5-11	8-12	0.75-1.20	0.6-2	0.20-0.24	0.0-2.9	1.0-3.5	.55
	11-20	16-27	1.30-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.5	.55
	20-37	18-32	1.35-1.65	0.2-2	0.19-0.21	3.0-5.9	0.5-1.0	.43
34: Brodeer, dry-----	37-67	5-28	1.20-1.40	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.43
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
	48-68	2-24	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
34: Brodeer, dry-----	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
34: Brodeer-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
35: Brodeer-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
Mushel-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
36: Brodeer, warm-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
Mushel, dry-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
37: Brodeer-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
37: Bouldercreek-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-16	0.65-0.90	0.6-2	0.18-0.31	0.0-2.9	3.0-6.0	.32
	8-21	8-16	0.65-1.00	0.6-2	0.14-0.31	0.0-2.9	1.0-3.0	.43
	21-27	6-20	1.15-1.65	0.6-2	0.06-0.15	0.0-2.9	0.5-1.0	.24
	27-34	6-20	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	34-53	6-16	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	53-69	2-14	1.20-1.70	2-6	0.04-0.12	0.0-2.9	0.1-0.5	.05
38: Brodeer-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
Flawsie, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-10	0.50-0.95	2-6	0.19-0.48	1.0-2.9	2.0-15	.37
	7-13	8-10	0.55-1.00	0.6-2	0.19-0.35	1.0-2.9	1.1-4.1	.49
	13-16	8-10	0.55-1.00	0.6-2	0.19-0.35	1.0-2.9	1.1-3.1	.55
	16-23	9-19	1.30-1.57	0.1-1	0.16-0.26	1.0-2.9	0.2-1.1	.43
	23-31	9-19	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-1.1	.37
	31-46	8-14	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-0.7	.37
39: Brodeer-----	46-62	8-15	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-0.6	.32
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
Lostpete-----	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-12	0.55-0.85	0.6-2	0.22-0.26	0.0-3.0	3.0-7.0	.37
	5-13	8-12	0.65-0.90	0.6-2	0.22-0.26	0.0-3.0	1.0-4.0	.49
	13-19	7-14	0.65-1.00	0.6-2	0.22-0.26	0.0-3.0	0.5-1.0	.55
	19-29	15-25	1.35-1.50	0.6-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	29-42	16-25	1.35-1.50	0.6-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	42-52	15-28	1.35-1.55	0.2-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	52-66	12-30	1.35-1.55	0.2-2	0.18-0.21	3.0-6.0	0.0-0.5	.43

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
40: Brodeur, moist-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
Lostpete, moist-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-12	0.55-0.85	0.6-2	0.22-0.26	0.0-3.0	3.0-7.0	.37
	5-13	8-12	0.65-0.90	0.6-2	0.22-0.26	0.0-3.0	1.0-4.0	.49
	13-19	7-14	0.65-1.00	0.6-2	0.22-0.26	0.0-3.0	0.5-1.0	.55
	19-29	15-25	1.35-1.50	0.6-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	29-42	16-25	1.35-1.50	0.6-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	42-52	15-28	1.35-1.55	0.2-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	52-66	12-30	1.35-1.55	0.2-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
41: Brodeur, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
Mushel-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
	48-68	2-24	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.24
42: Brodeur-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
42: Mushel-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
	48-68	2-24	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.24
43: Burntcreek-----	0-7	18-32	1.00-1.30	0.6-2	0.19-0.21	3.0-5.9	3.0-6.0	.20
	7-11	17-34	1.15-1.30	0.6-2	0.19-0.21	3.0-5.9	1.0-3.0	.32
	11-28	16-28	1.15-1.30	0.6-2	0.12-0.20	0.0-2.9	1.0-3.0	.32
	28-36	12-23	1.20-1.45	0.6-6	0.12-0.20	0.0-2.9	0.5-1.0	.37
	36-60	2-21	1.25-1.65	0.6-20	0.05-0.12	0.0-2.9	0.5-1.0	.10
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	3-7	16-26	1.20-1.40	0.6-2	0.13-0.22	0.0-2.9	2.0-4.0	.20
44: Campra-----	7-14	15-23	1.25-1.45	0.6-2	0.12-0.16	0.0-2.9	1.0-3.0	.15
	14-20	15-35	1.40-1.60	0.2-0.6	0.06-0.10	0.0-2.9	0.5-1.0	.10
	20-67	21-45	1.40-1.60	0.06-0.2	0.04-0.14	0.0-2.9	0.0-1.0	.10
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	3-7	16-26	1.20-1.40	0.6-2	0.13-0.22	0.0-2.9	2.0-4.0	.20
	7-14	15-23	1.25-1.45	0.6-2	0.12-0.16	0.0-2.9	1.0-3.0	.15
	14-20	15-35	1.40-1.60	0.2-0.6	0.06-0.10	0.0-2.9	0.5-1.0	.10
45: Campra-----	20-67	21-45	1.40-1.60	0.06-0.2	0.04-0.14	0.0-2.9	0.0-1.0	.10
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	3-7	16-26	1.20-1.40	0.6-2	0.13-0.22	0.0-2.9	2.0-4.0	.20
	7-14	15-23	1.25-1.45	0.6-2	0.12-0.16	0.0-2.9	1.0-3.0	.15
	14-20	15-35	1.40-1.60	0.2-0.6	0.06-0.10	0.0-2.9	0.5-1.0	.10
	20-67	21-45	1.40-1.60	0.06-0.2	0.04-0.14	0.0-2.9	0.0-1.0	.10
Sly-----	0-4	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	4-8	8-25	1.10-1.40	0.6-2	0.17-0.21	0.0-3.0	2.0-4.0	.37
	8-19	8-30	1.10-1.50	0.2-2	0.17-0.21	0.0-4.0	1.0-2.0	.43
	19-28	22-34	1.10-1.50	0.2-2	0.14-0.21	2.0-4.0	0.5-1.0	.43
	28-37	28-37	1.30-1.55	0.2-0.6	0.14-0.21	3.0-6.0	0.5-1.0	.37
	37-66	20-35	1.25-1.60	0.2-2	0.12-0.21	2.0-6.0	0.0-0.5	.17
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
46: Carlinton-----	2-11	15-27	1.00-1.35	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	11-22	18-30	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.43
	22-35	20-28	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.49
	35-62	23-38	1.50-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.5-1.0	.55
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-11	15-27	1.00-1.35	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	11-22	18-30	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.43

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
47: Carlinton-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-11	15-27	1.00-1.35	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	11-22	18-30	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.43
	22-35	20-28	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.49
	35-62	23-38	1.50-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.5-1.0	.55
48: Carlinton-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-11	15-27	1.00-1.35	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	11-22	18-30	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.43
	22-35	20-28	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.49
	35-62	23-38	1.50-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.5-1.0	.55
Kruse-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-6	8-20	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.37
	6-14	14-26	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	14-41	15-36	1.40-1.50	0.2-0.6	0.15-0.19	3.0-5.9	0.5-1.0	.37
	41-48	18-26	1.40-1.50	2-6	0.10-0.14	0.0-3.5	0.5-1.0	.17
49: Carlinton-----	48-61	3-25	1.40-1.50	2-6	0.07-0.14	0.0-2.9	0.0-0.5	.17
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-11	15-27	1.00-1.35	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	11-22	18-30	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.43
	22-35	20-28	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.49
Seddown-----	35-62	23-38	1.50-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.5-1.0	.55
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.32
	3-5	20-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-2.0	.43
	5-13	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.49
50: Caseycreek-----	13-35	14-35	1.35-1.45	0.2-2	0.15-0.17	3.0-5.9	0.5-1.0	.43
	35-44	24-36	1.40-1.50	0.2-2	0.09-0.13	0.0-2.9	0.0-0.5	.20
	44-54	---	---	---	---	---	---	---
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	8-20	1.10-1.55	0.6-2	0.10-0.25	0.0-3.0	2.0-4.0	.24
	4-7	18-21	1.30-1.65	0.6-2	0.10-0.25	0.0-3.0	1.0-3.0	.20
	7-16	10-30	1.40-1.65	0.6-2	0.12-0.25	0.0-3.0	0.5-2.0	.37
	16-22	20-26	1.40-1.65	0.6-2	0.10-0.20	0.0-3.0	0.5-1.0	.37
	22-48	5-24	1.40-1.65	0.2-2	0.11-0.20	0.0-3.0	0.0-0.5	.24
	48-66	2-8	1.25-1.60	0.2-2	0.05-0.16	0.0-3.0	0.0-0.5	.10



Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
51: Cavendish-----	0-8	18-25	1.15-1.35	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.37
	8-30	22-35	1.30-1.45	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.43
	30-43	24-36	1.25-1.40	0.2-0.6	0.13-0.19	3.0-5.9	0.0-0.5	.17
	43-53	---	---	---	---	---	---	---
52: Cavendish-----	0-8	18-25	1.15-1.35	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.37
	8-30	22-35	1.30-1.45	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.43
	30-43	24-36	1.25-1.40	0.2-0.6	0.13-0.19	3.0-5.9	0.0-0.5	.17
	43-53	---	---	---	---	---	---	---
Taney-----	0-10	16-26	1.25-1.35	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32
	10-31	12-25	1.40-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.55
	31-60	28-36	1.50-1.75	0.0015-0.06	0.04-0.07	3.0-5.9	0.5-2.0	.49
53: Cobbler-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	3-4	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	4-7	8-16	1.25-1.40	0.6-2	0.16-0.20	0.0-3.0	3.0-5.0	.28
	7-16	8-16	1.30-1.45	0.6-2	0.15-0.18	0.0-3.0	1.0-3.0	.43
	16-26	6-17	1.30-1.50	2-6	0.07-0.13	0.0-3.0	1.0-2.0	.15
	26-50	6-17	1.40-1.55	2-6	0.05-0.11	0.0-3.0	0.5-1.0	.28
	50-59	5-16	1.40-1.60	2-6	0.05-0.11	0.0-3.0	0.5-1.0	.28
	59-68	5-16	1.40-1.60	2-6	0.04-0.10	0.0-3.0	0.5-1.0	.17
Aldermand-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-15	0.65-0.98	0.6-2	0.16-0.18	0.0-2.9	3.0-9.5	.28
	7-17	8-15	0.65-1.28	0.6-2	0.16-0.18	0.0-2.9	0.5-3.8	.37
	17-25	5-16	1.00-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-1.1	.32
	25-33	3-16	1.15-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-0.9	.28
	33-44	1-14	1.25-1.75	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	44-62	0-4	1.35-1.75	20-100	0.01-0.05	0.0-2.9	0.0-0.5	.05
54: Cobbler-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	3-4	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	4-7	8-16	1.25-1.40	0.6-2	0.16-0.20	0.0-3.0	3.0-5.0	.28
	7-16	8-16	1.30-1.45	0.6-2	0.15-0.18	0.0-3.0	1.0-3.0	.43
	16-26	6-17	1.30-1.50	2-6	0.07-0.13	0.0-3.0	1.0-2.0	.15
	26-50	6-17	1.40-1.55	2-6	0.05-0.11	0.0-3.0	0.5-1.0	.28
	50-59	5-16	1.40-1.60	2-6	0.05-0.11	0.0-3.0	0.5-1.0	.28
	59-68	5-16	1.40-1.60	2-6	0.04-0.10	0.0-3.0	0.5-1.0	.17

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
54: Noil-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-20	1.25-1.45	0.6-2	0.09-0.27	0.0-2.9	2.0-9.5	.20
	9-19	5-20	1.30-1.60	0.6-6	0.06-0.19	0.0-2.9	0.3-1.9	.05
	19-29	5-25	1.30-1.60	0.6-6	0.04-0.14	0.0-2.9	0.3-0.5	.05
	29-43	3-14	1.35-1.70	2-6	0.01-0.10	0.0-2.9	0.0-1.1	.05
	43-53	---	---	---	---	---	---	---
55: Cranberry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-10	0.65-0.90	0.6-2	0.24-0.29	0.0-3.0	3.0-7.0	.37
	5-11	8-10	0.65-1.00	0.6-2	0.20-0.24	0.0-3.0	1.0-3.0	.55
	11-16	8-10	0.65-1.00	0.6-2	0.20-0.24	0.0-3.0	1.0-3.0	.55
	16-22	15-28	1.20-1.45	0.6-2	0.19-0.21	3.0-6.0	0.5-1.0	.49
	22-32	18-26	1.15-1.35	0.6-2	0.19-0.21	3.0-6.0	0.0-0.5	.49
	32-40	18-32	1.20-1.45	0.6-2	0.19-0.21	3.0-6.0	0.0-0.5	.43
	40-50	18-30	1.20-1.45	0.6-2	0.17-0.19	3.0-6.0	0.0-0.5	.49
	50-57	20-38	1.20-1.45	0.6-2	0.14-0.19	3.0-6.0	0.0-0.5	.43
	57-62	16-32	1.20-1.45	0.2-0.6	0.16-0.21	3.0-6.0	0.0-0.5	.43
56: Riswold-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	9-17	8-16	0.90-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
57: Crumarine-----	0-3	14-20	1.20-1.40	0.6-2	0.18-0.21	0.0-2.9	1.0-3.0	.37
	3-13	10-18	1.30-1.50	0.6-2	0.11-0.18	0.0-2.9	0.5-1.0	.43
	13-44	5-26	1.30-1.50	2-6	0.04-0.10	0.0-2.9	0.0-0.5	.28
	44-60	0-5	1.40-1.60	6-20	0.04-0.08	0.0-2.9	0.0-0.5	.10
57: Dam-----	---	---	---	---	---	---	---	---
58: Driscoll-----	0-13	16-25	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.28
	13-20	18-35	1.30-1.55	0.6-2	0.19-0.21	3.0-5.9	1.0-3.0	.43
	20-24	11-26	1.40-1.55	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.49
	24-54	35-55	1.45-1.55	0.06-0.2	0.15-0.21	6.0-8.9	0.5-1.0	.37
	54-70	32-50	1.45-1.55	0.06-0.2	0.15-0.19	6.0-8.9	0.0-1.0	.32

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
59: Driscoll-----	0-13	16-25	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.28
	13-20	18-35	1.30-1.55	0.6-2	0.19-0.21	3.0-5.9	1.0-3.0	.43
	20-24	11-26	1.40-1.55	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.49
	24-54	35-55	1.45-1.55	0.06-0.2	0.15-0.21	6.0-8.9	0.5-1.0	.37
	54-70	32-50	1.45-1.55	0.06-0.2	0.15-0.19	6.0-8.9	0.0-1.0	.32
Larkin-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-21	15-24	1.15-1.30	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.32
	21-62	20-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.1-2.0	.43
60: Dullaxe, high elevation-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
61: Dullaxe, dry-----	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
Dullaxe, wet-----	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-2.9	0.0-0.5	.15

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
62: Dullaxe-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
63: Dullaxe-----	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
64: Dullaxe-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
64: Dullaxe-----	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
64: Judgetown-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	8-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.37
	4-17	8-10	0.65-1.00	0.6-2	0.19-0.22	0.0-2.9	2.0-4.0	.49
	17-30	8-25	1.40-1.55	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.20
	30-52	2-12	1.45-1.60	2-20	0.04-0.10	0.0-2.9	0.0-0.5	.15
	52-62	---	---	---	---	---	---	---
65: Dullaxe-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
Judgetown, moist-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	8-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.37
	4-17	8-10	0.65-1.00	0.6-2	0.19-0.22	0.0-2.9	2.0-4.0	.49
	17-30	8-25	1.40-1.55	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.20
	30-52	2-12	1.45-1.60	2-20	0.04-0.10	0.0-2.9	0.0-0.5	.15
	52-62	---	---	---	---	---	---	---
66: Dullaxe-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
Jury, moist-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	3.0-6.0	.32
	6-29	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	29-48	5-22	1.40-1.50	2-6	0.08-0.13	0.0-2.9	1.0-2.0	.28
	48-62	2-20	1.30-1.65	0.6-20	0.06-0.10	0.0-2.9	0.0-0.5	.17
67: Dumps, wood slash-----	---	---	---	---	---	---	---	---
	---	---	---	---	---	---	---	---

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
68: Dworshak-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
	11-18	8-10	0.65-1.00	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.55
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
69: Dworshak-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
	11-18	8-10	0.65-1.00	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.55
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
Brequito-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-5	8-12	0.65-0.95	0.6-2	0.20-0.24	0.0-2.9	3.0-6.0	.37
	5-11	8-12	0.75-1.20	0.6-2	0.20-0.24	0.0-2.9	1.0-3.5	.55
	11-20	16-27	1.30-1.60	0.6-2	0.16-0.18	0.0-2.9	0.5-2.5	.55
	20-37	18-32	1.35-1.65	0.2-2	0.19-0.21	3.0-5.9	0.5-1.0	.43
70: Elkberry-----	37-67	5-28	1.20-1.40	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.43
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-3	7-10	0.65-0.90	0.6-2	0.24-0.47	0.0-3.0	3.0-6.0	.37
	3-16	8-10	0.65-1.00	0.6-2	0.24-0.47	0.0-3.0	1.0-3.0	.55
	16-19	12-21	1.30-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.5-1.0	.49
	19-25	15-25	1.31-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.0-0.5	.49
Elkberry, wet-----	25-36	18-25	1.31-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.0-0.5	.49
	36-45	22-35	1.31-1.70	0.2-0.6	0.12-0.26	0.0-3.0	0.0-0.5	.49
	45-55	23-40	1.27-1.70	0.2-0.6	0.12-0.26	0.0-3.0	0.0-0.5	.43
	55-65	20-40	1.27-1.75	0.2-0.6	0.12-0.24	0.0-3.0	0.0-0.5	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-3	7-10	0.65-0.90	0.6-2	0.24-0.47	0.0-3.0	3.0-6.0	.37
	3-16	8-10	0.65-1.00	0.6-2	0.24-0.47	0.0-3.0	1.0-3.0	.55
	16-19	12-21	1.30-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.5-1.0	.49
	19-25	15-25	1.31-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.0-0.5	.49
	25-36	18-25	1.31-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.0-0.5	.49
	36-45	22-35	1.31-1.70	0.2-0.6	0.12-0.26	0.0-3.0	0.0-0.5	.49
	45-55	23-40	1.27-1.70	0.2-0.6	0.12-0.26	0.0-3.0	0.0-0.5	.43
	55-65	20-40	1.27-1.75	0.2-0.6	0.12-0.24	0.0-3.0	0.0-0.5	.37

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
71: Elkberry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-3	7-10	0.65-0.90	0.6-2	0.24-0.47	0.0-3.0	3.0-6.0	.37
	3-16	8-10	0.65-1.00	0.6-2	0.24-0.47	0.0-3.0	1.0-3.0	.55
	16-19	12-21	1.30-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.5-1.0	.49
	19-25	15-25	1.31-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.0-0.5	.49
	25-36	18-25	1.31-1.70	0.2-0.6	0.16-0.26	0.0-3.0	0.0-0.5	.49
	36-45	22-35	1.31-1.70	0.2-0.6	0.12-0.26	0.0-3.0	0.0-0.5	.49
	45-55	23-40	1.27-1.70	0.2-0.6	0.12-0.26	0.0-3.0	0.0-0.5	.43
	55-65	20-40	1.27-1.75	0.2-0.6	0.12-0.24	0.0-3.0	0.0-0.5	.37
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
Dworshak-----	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
	11-18	8-10	0.65-1.00	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.55
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-15	0.65-0.95	0.6-2	0.16-0.19	0.0-2.9	2.0-4.0	.43
	6-13	8-18	0.75-1.20	0.6-2	0.16-0.19	0.0-2.9	1.0-3.0	.55
	13-41	15-30	1.20-1.50	0.6-2	0.09-0.15	3.0-5.9	0.5-2.0	.15
	41-62	18-37	1.40-1.60	0.2-2	0.04-0.08	3.0-5.9	0.0-0.5	.05
Riswold-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	9-17	8-16	0.90-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-15	0.65-0.95	0.6-2	0.16-0.19	0.0-2.9	2.0-4.0	.43
	6-13	8-18	0.75-1.20	0.6-2	0.16-0.19	0.0-2.9	1.0-3.0	.55
73: Elkridge-----	13-41	15-30	1.20-1.50	0.6-2	0.09-0.15	3.0-5.9	0.5-2.0	.15
	41-62	18-37	1.40-1.60	0.2-2	0.04-0.08	3.0-5.9	0.0-0.5	.05
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	9-17	8-16	0.90-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
Riswold-----	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	9-17	8-16	0.90-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	9-17	8-16	0.90-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
74: Fico, dry-----								
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-8	5-8	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.28
	8-17	8-10	0.65-1.00	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.32
	17-25	8-16	1.45-1.55	0.6-6	0.07-0.13	0.0-2.9	1.0-3.0	.20
	25-56	4-10	1.50-1.65	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.10
	56-66	---	---	---	---	---	---	---
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
Hucberit, warm-----	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-6	8-10	0.55-0.85	0.6-2	0.22-0.26	0.0-3.0	3.0-7.0	.37
	6-14	8-10	0.65-0.90	0.6-2	0.22-0.26	0.0-3.0	2.0-4.0	.49
	14-21	8-10	0.65-1.00	0.6-2	0.22-0.25	0.0-3.0	1.0-2.0	.55
	21-28	10-15	1.30-1.45	0.6-2	0.14-0.18	0.0-3.0	0.5-1.0	.28
	28-36	10-16	1.35-1.50	2-6	0.09-0.15	0.0-3.0	0.0-0.5	.17
	36-48	5-14	1.40-1.50	2-6	0.07-0.11	0.0-3.0	0.0-0.5	.17
	48-62	5-12	1.40-1.60	2-6	0.07-0.11	0.0-3.0	0.0-0.5	.15
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
75: Fico-----	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-8	5-8	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.28
	8-17	8-10	0.65-1.00	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.32
	17-25	8-16	1.45-1.55	0.6-6	0.07-0.13	0.0-2.9	1.0-3.0	.20
	25-56	4-10	1.50-1.65	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.10
	56-66	---	---	---	---	---	---	---
	0-14	8-16	0.65-0.90	0.6-2	0.20-0.21	0.0-2.9	10-13	.24
	14-22	8-17	0.65-1.00	0.6-2	0.13-0.18	0.0-2.9	8.0-12	.32
	22-37	8-17	1.40-1.50	0.6-2	0.11-0.18	0.0-2.9	7.0-9.0	.15
Weitas-----	37-43	3-10	1.40-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.15
	43-60	6-17	1.40-1.60	2-20	0.05-0.18	0.0-2.9	0.5-1.0	.15
76: Flewsie, high precipitation-----								
	0-4	4-10	0.65-0.85	0.6-2	0.19-0.21	0.0-2.9	3.0-6.0	.49
	4-15	4-10	0.65-0.90	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	15-37	4-10	1.30-1.50	2-6	0.13-0.18	0.0-2.9	0.0-0.5	.37
	37-60	2-6	1.40-1.70	6-20	0.09-0.12	0.0-2.9	0.0-0.5	.55



Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
77: Flewsie, low precipitation-----								
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-10	0.50-0.95	2-6	0.19-0.48	1.0-2.9	2.0-15	.37
	7-13	8-10	0.55-1.00	0.6-2	0.19-0.35	1.0-2.9	1.1-4.1	.49
	13-16	8-10	0.55-1.00	0.6-2	0.19-0.35	1.0-2.9	1.1-3.1	.55
	16-23	9-19	1.30-1.57	0.1-1	0.16-0.26	1.0-2.9	0.2-1.1	.43
	23-31	9-19	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-1.1	.37
	31-46	8-14	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-0.7	.37
	46-62	8-15	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-0.6	.32
Flewsie, dry-----								
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-10	0.50-0.95	2-6	0.19-0.48	1.0-2.9	2.0-15	.37
	7-13	8-10	0.55-1.00	0.6-2	0.19-0.35	1.0-2.9	1.1-4.1	.49
	13-16	8-10	0.55-1.00	0.6-2	0.19-0.35	1.0-2.9	1.1-3.1	.55
	16-23	9-19	1.30-1.57	0.1-1	0.16-0.26	1.0-2.9	0.2-1.1	.43
	23-31	9-19	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-1.1	.37
	31-46	8-14	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-0.7	.37
	46-62	8-15	1.30-1.57	0.1-1	0.10-0.26	1.0-2.9	0.1-0.6	.32
78: Floodwood-----								
	0-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-10	.37
	5-12	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	12-38	18-27	1.40-1.65	0.2-0.6	0.13-0.18	0.0-2.9	0.5-1.0	.37
	38-60	0-10	1.40-1.60	2-20	0.05-0.11	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-10	.32
	3-13	8-12	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.43
	13-35	15-26	1.40-1.65	0.2-0.6	0.13-0.18	0.0-2.9	0.5-1.0	.37
79: Floodwood, warm-----								
	35-55	12-20	1.40-1.60	0.2-0.6	0.10-0.16	0.0-2.9	0.3-0.8	.28
	55-63	5-19	1.40-1.60	2-20	0.05-0.11	0.0-2.9	0.0-0.5	.28
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
80: Floodwood-----	0-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-10	.37
	5-12	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	12-38	18-27	1.40-1.65	0.2-0.6	0.13-0.18	0.0-2.9	0.5-1.0	.37
	38-60	0-10	1.40-1.60	2-20	0.05-0.11	0.0-2.9	0.0-0.5	.24
Keeler, warm-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	14-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	7-18	14-17	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.49
81: Floodwood-----	18-38	20-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	38-62	13-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.28
	0-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-10	.37
	5-12	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
Keeler, warm-----	12-38	18-27	1.40-1.65	0.2-0.6	0.13-0.18	0.0-2.9	0.5-1.0	.37
	38-60	0-10	1.40-1.60	2-20	0.05-0.11	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
82: Flumecreek-----	2-7	14-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	7-18	14-17	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.49
	18-38	20-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	38-62	13-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.28
83: Flumecreek-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-10	8-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.37
	10-21	8-10	0.65-1.00	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.55
83: Flumecreek-----	21-32	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	32-43	18-24	1.30-1.40	0.6-2	0.08-0.10	0.0-2.9	0.0-0.5	.15
	43-52	12-27	1.35-1.45	0.6-2	0.05-0.06	0.0-2.9	0.0-0.5	.10
	52-67	12-27	1.40-1.50	2-6	0.04-0.06	0.0-2.9	0.0-0.5	.02
83: Flumecreek-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-10	8-10	0.65-0.90	0.6-2	0.20-0.23	0.0-2.9	3.0-6.0	.37
	10-21	8-10	0.65-1.00	0.6-2	0.20-0.22	0.0-2.9	1.0-3.0	.55
83: Flumecreek-----	21-32	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	32-43	18-24	1.30-1.40	0.6-2	0.08-0.10	0.0-2.9	0.0-0.5	.15
	43-52	12-27	1.35-1.45	0.6-2	0.05-0.06	0.0-2.9	0.0-0.5	.10
	52-67	12-27	1.40-1.50	2-6	0.04-0.06	0.0-2.9	0.0-0.5	.02

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
83: Stepoff-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	3-8	8-12	0.65-0.90	0.6-2	0.18-0.30	0.0-2.9	4.0-8.0	.32
	8-24	8-18	0.65-1.00	0.6-2	0.18-0.30	0.0-2.9	3.0-6.0	.32
	24-38	14-22	1.30-1.55	0.6-2	0.06-0.18	0.0-2.9	0.5-3.0	.24
	38-46	14-22	1.30-1.55	0.6-20	0.04-0.18	0.0-2.9	0.5-2.0	.24
	46-63	2-18	1.40-1.65	2-20	0.04-0.11	0.0-2.9	0.5-1.0	.10
Dworshak, dry-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
	11-18	8-10	0.65-1.00	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.55
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
84: Fordcreek-----	0-6	15-25	1.30-1.50	2-6	0.14-0.18	0.0-2.9	2.0-5.0	.28
	6-16	16-30	1.20-1.40	0.2-2	0.15-0.21	3.0-5.9	0.5-3.0	.32
	16-27	15-37	1.25-1.50	0.2-2	0.14-0.20	0.0-5.9	0.0-1.0	.28
	27-41	8-35	1.25-1.50	0.2-2	0.08-0.20	0.0-5.9	0.0-1.0	.37
	41-51	---	---	---	---	---	---	---
85: Fordcreek-----	0-6	15-25	1.30-1.50	2-6	0.14-0.18	0.0-2.9	2.0-5.0	.28
	6-16	16-30	1.20-1.40	0.2-2	0.15-0.21	3.0-5.9	0.5-3.0	.32
	16-27	15-37	1.25-1.50	0.2-2	0.14-0.20	0.0-5.9	0.0-1.0	.28
	27-41	8-35	1.25-1.50	0.2-2	0.08-0.20	0.0-5.9	0.0-1.0	.37
	41-51	---	---	---	---	---	---	---
86: Garveson, high precipitation-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	3-9	0.65-0.90	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.37
	4-18	1-9	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	18-25	1-5	1.40-1.60	6-20	0.03-0.09	0.0-2.9	0.0-0.5	.05
	25-62	0-5	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
Floodwood-----	0-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-10	.37
	5-12	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	12-38	18-27	1.40-1.65	0.2-0.6	0.13-0.18	0.0-2.9	0.5-1.0	.37
	38-60	0-10	1.40-1.60	2-20	0.05-0.11	0.0-2.9	0.0-0.5	.24

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
87: Gramil-----	0-12	17-28	1.15-1.25	0.6-2	0.18-0.21	0.0-2.9	2.0-5.0	.37
	12-19	19-28	1.15-1.30	0.6-2	0.18-0.20	0.0-2.9	1.0-3.0	.49
	19-27	21-29	1.15-1.25	0.6-2	0.18-0.20	0.0-2.9	1.0-2.0	.37
	27-39	60-93	1.30-1.40	0.0015-0.06	0.15-0.18	3.0-5.9	0.5-1.0	.17
	39-70	25-65	1.20-1.40	0.06-2	0.14-0.18	3.0-5.9	0.5-1.0	.20
Lewhand-----	0-8	16-39	0.90-1.25	0.6-2	0.19-0.24	0.5-3.0	4.0-7.0	.37
	8-12	16-35	1.15-1.40	0.2-2	0.19-0.21	0.5-3.0	2.0-4.0	.43
	12-18	10-26	1.25-1.55	0.6-2	0.18-0.20	0.0-3.0	0.5-1.0	.64
	18-32	15-40	1.50-1.75	0.0015-0.06	0.05-0.07	0.0-3.0	0.1-1.0	.55
	32-60	8-44	1.40-1.60	0.2-20	0.08-0.20	0.0-3.0	0.1-1.0	.49
88: Gramil-----	0-12	17-28	1.15-1.25	0.6-2	0.18-0.21	0.0-2.9	2.0-5.0	.37
	12-19	19-28	1.15-1.30	0.6-2	0.18-0.20	0.0-2.9	1.0-3.0	.49
	19-27	21-29	1.15-1.25	0.6-2	0.18-0.20	0.0-2.9	1.0-2.0	.37
	27-39	60-93	1.30-1.40	0.0015-0.06	0.15-0.18	3.0-5.9	0.5-1.0	.17
	39-70	25-65	1.20-1.40	0.06-2	0.14-0.18	3.0-5.9	0.5-1.0	.20
Reggear-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-23	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	2.0-4.0	.43
	8-13	8-25	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	1.0-3.0	.55
	13-22	16-26	1.20-1.55	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.55
	22-31	17-33	1.50-1.65	0.2-0.6	0.19-0.21	3.0-5.9	0.0-0.5	.55
89: Grandad-----	31-60	22-45	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55
	60-86	19-38	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
90: Grandad, dry-----	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
Grandad, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
Grandad, dry-----	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
90: Grandad-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
91: Grandad, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
Grandad-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
92: Grandad-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
Rettig-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
93: Grandad, wet-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
94: Grandad, dry-----	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
95: Grangemont-----	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	8-10	0.65-0.90	0.6-2	0.19-0.21	0.0-3.0	3.0-6.0	.37
	4-16	8-10	0.65-1.00	0.6-2	0.19-0.21	0.0-3.0	1.0-3.0	.55
	16-27	15-24	0.95-1.60	0.6-2	0.16-0.21	0.0-4.0	0.5-1.0	.49
	27-53	17-25	0.85-1.60	0.6-2	0.16-0.21	0.0-4.0	0.5-1.0	.49
	53-63	10-24	1.15-1.70	0.6-6	0.06-0.18	0.0-4.0	0.0-0.5	.20
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
95: Grangemont-----	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
95: Kauder-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-4	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	2.0-6.0	.43
	4-15	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	1.0-2.0	.49
	15-23	16-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.64
	23-34	16-32	1.30-1.55	0.6-2	0.19-0.21	0.0-2.9	0.0-0.5	.55
	34-95	20-38	1.60-1.75	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.49
96: Grangemont, dry-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
Kauder, dry-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-4	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	2.0-6.0	.43
	4-15	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	1.0-2.0	.49
	15-23	16-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.64
	23-34	16-32	1.30-1.55	0.6-2	0.19-0.21	0.0-2.9	0.0-0.5	.55
	34-95	20-38	1.60-1.75	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.49
97: Grangemont-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
Kauder, moist-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-4	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	2.0-6.0	.43
	4-15	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	1.0-2.0	.49
	15-23	16-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.64
	23-34	16-32	1.30-1.55	0.6-2	0.19-0.21	0.0-2.9	0.0-0.5	.55
	34-95	20-38	1.60-1.75	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.49
98: Grangemont, wet-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
98: Riswold-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-15	0.75-0.95	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	9-17	8-16	0.90-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
99: Grasshopper-----	0-16	12-30	1.20-1.35	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	16-22	20-34	1.30-1.40	0.2-0.6	0.18-0.20	3.0-5.9	1.0-3.0	.28
	22-40	17-23	1.25-1.40	0.6-6	0.15-0.18	0.0-2.9	1.0-3.0	.20
	40-53	24-34	1.30-1.40	0.2-2	0.18-0.20	0.0-2.9	0.5-2.0	.32
	53-58	18-24	1.30-1.40	0.6-2	0.08-0.10	0.0-2.9	0.0-0.5	.05
	58-64	6-35	1.40-1.60	0.2-20	0.06-0.19	0.0-2.9	0.5-1.0	.24
100: Gwin-----	0-4	15-27	1.20-1.35	0.6-2	0.10-0.12	0.0-2.9	2.0-3.0	.24
	4-8	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.15
	8-13	19-37	1.30-1.45	0.2-2	0.07-0.09	0.0-2.9	1.0-2.0	.15
	13-23	---	---	---	---	---	---	---
	0-3	16-27	1.10-1.30	0.6-2	0.13-0.15	3.0-5.9	2.0-4.0	.24
	3-11	18-30	1.15-1.35	0.2-0.6	0.10-0.12	3.0-5.9	1.0-3.0	.17
	11-36	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
Kettenbach-----	36-46	---	---	---	---	---	---	---
	0-4	15-27	1.20-1.35	0.6-2	0.10-0.12	0.0-2.9	2.0-3.0	.24
	4-8	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.15
	8-13	19-37	1.30-1.45	0.2-2	0.07-0.09	0.0-2.9	1.0-2.0	.15
	13-23	---	---	---	---	---	---	---
101: Gwin-----	0-3	16-27	1.10-1.30	0.6-2	0.13-0.15	3.0-5.9	2.0-4.0	.24
	3-11	18-30	1.15-1.35	0.2-0.6	0.10-0.12	3.0-5.9	1.0-3.0	.17
	11-36	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	36-46	---	---	---	---	---	---	---
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	15-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.17
Kettenbach-----	11-21	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.10
	21-52	20-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15
	52-64	24-38	1.40-1.55	0.2-0.6	0.06-0.08	0.0-2.9	0.5-1.0	.05
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	15-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.17
	11-21	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.10
Keuterville-----	21-52	20-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15
	52-64	24-38	1.40-1.55	0.2-0.6	0.06-0.08	0.0-2.9	0.5-1.0	.05
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	15-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.17
	11-21	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.10
	21-52	20-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15



Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
102: Hildebrand-----	0-4	8-10	0.65-0.95	0.6-2	0.19-0.21	0.0-3.0	2.0-4.0	.37
	4-12	8-10	0.75-1.20	0.6-2	0.19-0.21	0.0-3.0	1.0-3.0	.49
	12-40	7-35	0.95-1.65	0.6-2	0.16-0.21	0.0-5.0	0.5-1.0	.37
	40-60	5-21	0.95-1.70	0.6-2	0.04-0.21	0.0-4.0	0.0-0.5	.49
Spacecreek, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-10	8-10	0.65-0.90	2-6	0.19-0.21	0.0-3.0	2.0-10	.32
	10-16	8-10	0.65-1.00	2-6	0.19-0.21	0.0-3.0	0.3-4.0	.43
	16-28	15-33	0.95-1.65	0.6-2	0.12-0.21	0.0-6.0	0.1-2.0	.37
	28-42	14-25	0.95-1.65	0.6-2	0.09-0.18	0.0-6.0	0.1-0.4	.24
103: Hubub, wet-----	42-64	3-22	0.95-1.70	0.6-2	0.04-0.21	0.0-3.0	0.0-0.3	.55
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-14	0.65-0.90	0.6-2	0.18-0.35	0.0-2.9	3.0-10	.37
	5-17	8-15	0.65-1.00	0.6-2	0.18-0.35	0.0-2.9	1.0-3.0	.55
	17-19	12-23	1.50-1.60	0.6-2	0.19-0.25	0.0-2.9	0.5-2.0	.49
104: Hubub, wet-----	19-42	20-30	1.50-1.60	0.6-2	0.14-0.21	0.0-2.9	0.0-0.5	.49
	42-62	18-30	1.50-1.70	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.15
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-14	0.65-0.90	0.6-2	0.18-0.35	0.0-2.9	3.0-10	.37
	5-17	8-15	0.65-1.00	0.6-2	0.18-0.35	0.0-2.9	1.0-3.0	.55
Dworshak-----	17-19	12-23	1.50-1.60	0.6-2	0.19-0.25	0.0-2.9	0.5-2.0	.49
	19-42	20-30	1.50-1.60	0.6-2	0.14-0.21	0.0-2.9	0.0-0.5	.49
	42-62	18-30	1.50-1.70	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.15
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
105: Hubub-----	11-18	8-10	0.65-1.00	0.6-2	0.19-0.25	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.55
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-14	0.65-0.90	0.6-2	0.18-0.35	0.0-2.9	3.0-10	.37
	5-17	8-15	0.65-1.00	0.6-2	0.18-0.35	0.0-2.9	1.0-3.0	.55
	17-19	12-23	1.50-1.60	0.6-2	0.19-0.25	0.0-2.9	0.5-2.0	.49
	19-42	20-30	1.50-1.60	0.6-2	0.14-0.21	0.0-2.9	0.0-0.5	.49
	42-62	18-30	1.50-1.70	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.15
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
105: Lostpete-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-12	0.55-0.85	0.6-2	0.22-0.26	0.0-3.0	3.0-7.0	.37
	5-13	8-12	0.65-0.90	0.6-2	0.22-0.26	0.0-3.0	1.0-4.0	.49
	13-19	7-14	0.65-1.00	0.6-2	0.22-0.26	0.0-3.0	0.5-1.0	.55
	19-29	15-25	1.35-1.50	0.6-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	29-42	16-25	1.35-1.50	0.6-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	42-52	15-28	1.35-1.55	0.2-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
	52-66	12-30	1.35-1.55	0.2-2	0.18-0.21	3.0-6.0	0.0-0.5	.43
106: Hucberit-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-6	8-10	0.55-0.85	0.6-2	0.22-0.26	0.0-3.0	3.0-7.0	.37
	6-14	8-10	0.65-0.90	0.6-2	0.22-0.26	0.0-3.0	2.0-4.0	.49
	14-21	8-10	0.65-1.00	0.6-2	0.22-0.25	0.0-3.0	1.0-2.0	.55
	21-28	10-15	1.30-1.45	0.6-2	0.14-0.18	0.0-3.0	0.5-1.0	.28
	28-36	10-16	1.35-1.50	2-6	0.09-0.15	0.0-3.0	0.0-0.5	.17
	36-48	5-14	1.40-1.50	2-6	0.07-0.11	0.0-3.0	0.0-0.5	.17
	48-62	5-12	1.40-1.60	2-6	0.07-0.11	0.0-3.0	0.0-0.5	.15
107: Hucberit-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-6	8-10	0.55-0.85	0.6-2	0.22-0.26	0.0-3.0	3.0-7.0	.37
	6-14	8-10	0.65-0.90	0.6-2	0.22-0.26	0.0-3.0	2.0-4.0	.49
	14-21	8-10	0.65-1.00	0.6-2	0.22-0.25	0.0-3.0	1.0-2.0	.55
	21-28	10-15	1.30-1.45	0.6-2	0.14-0.18	0.0-3.0	0.5-1.0	.28
	28-36	10-16	1.35-1.50	2-6	0.09-0.15	0.0-3.0	0.0-0.5	.17
	36-48	5-14	1.40-1.50	2-6	0.07-0.11	0.0-3.0	0.0-0.5	.17
	48-62	5-12	1.40-1.60	2-6	0.07-0.11	0.0-3.0	0.0-0.5	.15
Vaywood, high precipitation-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-10	0.65-0.90	0.6-2	0.19-0.22	0.0-2.9	3.0-6.0	.37
	7-15	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.43
	15-20	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.49
	20-25	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.15
	25-38	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.05
	38-47	5-13	1.35-1.50	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.28
	47-62	3-14	1.50-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.20

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
108: Hugus-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	3.0-10	.37
	7-19	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	1.0-3.0	.55
	19-32	15-22	1.50-1.60	0.6-2	0.09-0.12	0.0-2.9	0.5-3.0	.15
	32-51	12-21	1.50-1.60	0.2-2	0.05-0.08	0.0-2.9	0.5-1.0	.05
	51-60	3-15	1.20-1.65	2-6	0.01-0.08	0.0-2.9	0.0-0.5	.05
109: Hugus-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	3.0-10	.37
	7-19	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	1.0-3.0	.55
	19-32	15-22	1.50-1.60	0.6-2	0.09-0.12	0.0-2.9	0.5-3.0	.15
	32-51	12-21	1.50-1.60	0.2-2	0.05-0.08	0.0-2.9	0.5-1.0	.05
	51-60	3-15	1.20-1.65	2-6	0.01-0.08	0.0-2.9	0.0-0.5	.05
110: Hugus, moist-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	3.0-10	.37
	7-19	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	1.0-3.0	.55
	19-32	15-22	1.50-1.60	0.6-2	0.09-0.12	0.0-2.9	0.5-3.0	.15
	32-51	12-21	1.50-1.60	0.2-2	0.05-0.08	0.0-2.9	0.5-1.0	.05
	51-60	3-15	1.20-1.65	2-6	0.01-0.08	0.0-2.9	0.0-0.5	.05
111: Hugus, high precipitation-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	3.0-10	.37
	7-19	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	1.0-3.0	.55
	19-32	15-22	1.50-1.60	0.6-2	0.09-0.12	0.0-2.9	0.5-3.0	.15
	32-51	12-21	1.50-1.60	0.2-2	0.05-0.08	0.0-2.9	0.5-1.0	.05
	51-60	3-15	1.20-1.65	2-6	0.01-0.08	0.0-2.9	0.0-0.5	.05
112: Hugus, moist-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	3.0-10	.37
	7-19	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	1.0-3.0	.55
	19-32	15-22	1.50-1.60	0.6-2	0.09-0.12	0.0-2.9	0.5-3.0	.15
	32-51	12-21	1.50-1.60	0.2-2	0.05-0.08	0.0-2.9	0.5-1.0	.05
	51-60	3-15	1.20-1.65	2-6	0.01-0.08	0.0-2.9	0.0-0.5	.05

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
112: Hugus-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	3.0-10	.37
	7-19	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	1.0-3.0	.55
	19-32	15-22	1.50-1.60	0.6-2	0.09-0.12	0.0-2.9	0.5-3.0	.15
	32-51	12-21	1.50-1.60	0.2-2	0.05-0.08	0.0-2.9	0.5-1.0	.05
	51-60	3-15	1.20-1.65	2-6	0.01-0.08	0.0-2.9	0.0-0.5	.05
113: Hugus-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	3.0-10	.37
	7-19	8-10	0.65-0.85	0.6-2	0.16-0.34	0.0-2.9	1.0-3.0	.55
	19-32	15-22	1.50-1.60	0.6-2	0.09-0.12	0.0-2.9	0.5-3.0	.15
	32-51	12-21	1.50-1.60	0.2-2	0.05-0.08	0.0-2.9	0.5-1.0	.05
	51-60	3-15	1.20-1.65	2-6	0.01-0.08	0.0-2.9	0.0-0.5	.05
Dworshak-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
	11-18	8-10	0.65-1.00	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.55
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
114: Itzee-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	8-17	1.15-1.60	2-6	0.09-0.18	0.0-3.0	2.0-4.0	.15
	4-12	2-14	1.35-1.70	6-20	0.05-0.15	0.0-3.0	1.0-3.0	.28
	12-47	2-13	1.35-1.65	6-20	0.05-0.14	0.0-3.0	1.0-3.0	.20
	47-60	1-11	1.40-1.65	6-20	0.02-0.11	0.0-3.0	1.0-3.0	.02
115: Jacket-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-16	18-26	1.10-1.30	0.6-2	0.19-0.23	0.0-2.9	4.0-6.0	.37
	16-33	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.5-1.0	.32
	33-64	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.0-0.5	.37
116: Jacket-----	0-7	22-26	1.10-1.30	0.6-2	0.19-0.23	0.0-2.9	4.0-6.0	.28
	7-27	28-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	1.0-3.0	.37
	27-56	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.5-1.0	.37
	56-63	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.0-0.5	.37

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
117: Jacket-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-16	18-26	1.10-1.30	0.6-2	0.19-0.23	0.0-2.9	4.0-6.0	.37
	16-33	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.5-1.0	.32
	33-64	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.0-0.5	.37
Wellsbench-----	0-6	18-26	1.15-1.40	0.6-2	0.18-0.20	0.0-2.9	2.0-4.0	.32
	6-14	28-38	1.35-1.45	0.2-0.6	0.12-0.16	3.0-5.9	1.0-3.0	.17
	14-41	35-44	1.40-1.60	0.06-0.2	0.08-0.12	3.0-5.9	0.5-2.0	.10
	41-51	---	---	---	---	---	---	---
118: Jacot-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-6	3-9	0.65-0.85	0.6-2	0.19-0.21	0.0-2.9	3.0-6.0	.43
	6-16	3-9	0.65-0.85	0.6-2	0.16-0.21	0.0-2.9	1.0-3.0	.55
	16-42	5-18	1.40-1.60	0.6-6	0.07-0.15	0.0-2.9	0.5-1.0	.15
Garveson-----	42-50	3-10	1.40-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	50-62	3-10	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.10
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	3-9	0.65-0.90	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.37
119: Jacot-----	4-18	1-9	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	18-25	1-5	1.40-1.60	6-20	0.03-0.09	0.0-2.9	0.0-0.5	.05
	25-62	0-5	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
Garveson-----	2-6	3-9	0.65-0.85	0.6-2	0.19-0.21	0.0-2.9	3.0-6.0	.43
	6-16	3-9	0.65-0.85	0.6-2	0.16-0.21	0.0-2.9	1.0-3.0	.55
	16-42	5-18	1.40-1.60	0.6-6	0.07-0.15	0.0-2.9	0.5-1.0	.15
	42-50	3-10	1.40-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	50-62	3-10	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.10
Garveson-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	3-9	0.65-0.90	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.37
	4-18	1-9	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	18-25	1-5	1.40-1.60	6-20	0.03-0.09	0.0-2.9	0.0-0.5	.05
Garveson-----	25-62	0-5	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	3-9	0.65-0.90	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.37
	4-18	1-9	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
Garveson-----	18-25	1-5	1.40-1.60	6-20	0.03-0.09	0.0-2.9	0.0-0.5	.05
	25-62	0-5	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	3-9	0.65-0.90	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.37
Garveson-----	4-18	1-9	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	18-25	1-5	1.40-1.60	6-20	0.03-0.09	0.0-2.9	0.0-0.5	.05
	25-62	0-5	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
120: Jaype	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	5-10	0.65-0.95	0.6-2	0.18-0.34	0.0-2.9	3.0-9.5	.32
	5-14	5-10	0.75-1.20	0.6-2	0.18-0.34	0.0-2.9	1.3-3.3	.49
	14-26	15-32	1.25-1.45	0.2-2	0.11-0.18	3.0-5.9	0.5-1.0	.43
	26-72	25-40	1.35-1.45	0.0015-0.06	0.14-0.21	3.0-5.9	0.0-0.5	.49
	72-82	5-60	1.25-1.65	0.0036-6	0.07-0.21	3.0-5.9	0.0-0.5	.37
Revling	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	7-21	8-14	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	21-35	15-35	1.20-1.40	0.2-2	0.16-0.19	2.0-6.0	0.5-1.0	.49
	35-86	14-40	1.30-1.55	0.06-2	0.12-0.16	0.0-6.0	0.0-0.5	.49
121: Jaype, dry	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	5-10	0.65-0.95	0.6-2	0.18-0.34	0.0-2.9	3.0-9.5	.32
	5-14	5-10	0.75-1.20	0.6-2	0.18-0.34	0.0-2.9	1.3-3.3	.49
	14-26	15-32	1.25-1.45	0.2-2	0.11-0.18	3.0-5.9	0.5-1.0	.43
	26-72	25-40	1.35-1.45	0.0015-0.06	0.14-0.21	3.0-5.9	0.0-0.5	.49
	72-82	5-60	1.25-1.65	0.0036-6	0.07-0.21	3.0-5.9	0.0-0.5	.37
Revling, dry	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	7-21	8-14	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	21-35	15-35	1.20-1.40	0.2-2	0.16-0.19	2.0-6.0	0.5-1.0	.49
	35-86	14-40	1.30-1.55	0.06-2	0.12-0.16	0.0-6.0	0.0-0.5	.49
122: Jaype	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	5-10	0.65-0.95	0.6-2	0.18-0.34	0.0-2.9	3.0-9.5	.32
	5-14	5-10	0.75-1.20	0.6-2	0.18-0.34	0.0-2.9	1.3-3.3	.49
	14-26	15-32	1.25-1.45	0.2-2	0.11-0.18	3.0-5.9	0.5-1.0	.43
	26-72	25-40	1.35-1.45	0.0015-0.06	0.14-0.21	3.0-5.9	0.0-0.5	.49
	72-82	5-60	1.25-1.65	0.0036-6	0.07-0.21	3.0-5.9	0.0-0.5	.37
Statemeadow	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	8-19	1.00-1.20	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	2-9	16-25	1.00-1.20	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.43
	9-51	19-34	1.15-1.25	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	51-61	20-40	1.20-1.50	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.49

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
123: Joel	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-16	13-23	1.00-1.35	0.6-2	0.16-0.22	0.0-2.9	3.0-10	.32
	16-27	19-23	1.20-1.50	0.6-2	0.16-0.22	0.0-2.9	1.5-3.3	.43
	27-40	22-28	1.45-1.60	0.6-2	0.16-0.23	0.0-4.0	0.5-1.1	.49
	40-61	24-34	1.50-1.70	0.2-0.6	0.13-0.21	3.0-5.9	0.1-0.6	.49
Setters	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-15	14-25	1.30-1.50	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.28
	15-28	15-26	1.30-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.43
	28-34	10-20	1.30-1.60	0.06-2	0.19-0.24	3.0-6.0	0.5-1.0	.55
	34-62	36-45	1.40-1.60	0.06-0.2	0.15-0.19	6.0-8.9	0.5-1.0	.37
124: Johnson	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-12	12-24	1.30-1.40	0.6-2	0.14-0.17	0.0-2.9	2.8-10	.32
	12-22	18-38	1.30-1.45	0.6-2	0.15-0.19	0.0-2.9	0.5-3.0	.32
	22-54	12-38	1.30-1.45	0.6-2	0.16-0.20	3.0-5.9	0.3-1.2	.32
	54-64	---	---	---	---	---	---	---
125: Johnson	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-12	12-24	1.30-1.40	0.6-2	0.14-0.17	0.0-2.9	2.8-10	.32
	12-22	18-38	1.30-1.45	0.6-2	0.15-0.19	0.0-2.9	0.5-3.0	.32
	22-54	12-38	1.30-1.45	0.6-2	0.16-0.20	3.0-5.9	0.3-1.2	.32
	54-64	---	---	---	---	---	---	---
Swayne	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	16-26	1.20-1.40	0.6-2	0.18-0.21	3.0-5.9	2.0-4.0	.32
	8-14	20-30	1.40-1.50	0.6-2	0.18-0.21	3.0-5.9	1.0-2.0	.43
	14-22	23-34	1.45-1.55	0.6-2	0.17-0.20	3.0-5.9	0.5-1.0	.49
	22-56	24-50	1.50-1.60	0.06-0.2	0.16-0.18	6.0-8.9	0.0-0.5	.37
	56-61	34-42	1.50-1.60	0.06-0.2	0.16-0.18	6.0-8.9	0.0-0.5	.32
126: Johnson	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-12	12-24	1.30-1.40	0.6-2	0.14-0.17	0.0-2.9	2.8-10	.32
	12-22	18-38	1.30-1.45	0.6-2	0.15-0.19	0.0-2.9	0.5-3.0	.32
	22-54	12-38	1.30-1.45	0.6-2	0.16-0.20	3.0-5.9	0.3-1.2	.32
	54-64	---	---	---	---	---	---	---
Swayne	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	16-26	1.20-1.40	0.6-2	0.18-0.21	3.0-5.9	2.0-4.0	.32
	8-14	20-30	1.40-1.50	0.6-2	0.18-0.21	3.0-5.9	1.0-2.0	.43
	14-22	23-34	1.45-1.55	0.6-2	0.17-0.20	3.0-5.9	0.5-1.0	.49
	22-56	24-50	1.50-1.60	0.06-0.2	0.16-0.18	6.0-8.9	0.0-0.5	.37
	56-61	34-42	1.50-1.60	0.06-0.2	0.16-0.18	6.0-8.9	0.0-0.5	.32

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
127: Johnson	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-12	12-24	0.10-0.30	0.6-2	0.14-0.17	0.0-2.9	2.8-10	.32
	12-22	18-38	1.30-1.45	0.6-2	0.15-0.19	0.0-2.9	0.5-3.0	.32
	22-54	12-38	1.30-1.45	0.6-2	0.16-0.20	3.0-5.9	0.3-1.2	.32
	54-64	---	---	---	---	---	---	---
Texascreek	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-13	8-18	1.25-1.40	0.6-2	0.15-0.17	0.0-2.9	2.0-4.0	.32
	13-25	5-19	1.25-1.45	0.6-6	0.12-0.16	0.0-2.9	1.0-3.0	.20
	25-33	3-15	1.35-1.55	0.6-6	0.08-0.13	0.0-2.9	0.5-2.0	.20
	33-43	---	---	---	---	---	---	---
128: Jury	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	3.0-6.0	.32
	6-29	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	29-48	5-22	1.40-1.50	2-6	0.08-0.13	0.0-2.9	1.0-2.0	.28
	48-62	2-20	1.30-1.65	0.6-20	0.06-0.10	0.0-2.9	0.0-0.5	.17
129: Jury	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	3.0-6.0	.32
	6-29	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	29-48	5-22	1.40-1.50	2-6	0.08-0.13	0.0-2.9	1.0-2.0	.28
	48-62	2-20	1.30-1.65	0.6-20	0.06-0.10	0.0-2.9	0.0-0.5	.17
130: Jury, cold	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	3.0-6.0	.32
	6-29	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	29-48	5-22	1.40-1.50	2-6	0.08-0.13	0.0-2.9	1.0-2.0	.28
	48-62	2-20	1.30-1.65	0.6-20	0.06-0.10	0.0-2.9	0.0-0.5	.17
131: Jury	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	3.0-6.0	.32
	6-29	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	29-48	5-22	1.40-1.50	2-6	0.08-0.13	0.0-2.9	1.0-2.0	.28
	48-62	2-20	1.30-1.65	0.6-20	0.06-0.10	0.0-2.9	0.0-0.5	.17
Weitas	0-14	8-16	0.65-0.90	0.6-2	0.20-0.21	0.0-2.9	10-13	.24
	14-22	8-17	0.65-1.00	0.6-2	0.13-0.18	0.0-2.9	8.0-12	.32
	22-37	8-17	1.40-1.50	0.6-2	0.11-0.18	0.0-2.9	7.0-9.0	.15
	37-43	3-10	1.40-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.15
	43-60	6-17	1.40-1.60	2-20	0.05-0.18	0.0-2.9	0.5-1.0	.15



Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
132: Jury-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	3.0-6.0	.32
	6-29	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	29-48	5-22	1.40-1.50	2-6	0.08-0.13	0.0-2.9	1.0-2.0	.28
	48-62	2-20	1.30-1.65	0.6-20	0.06-0.10	0.0-2.9	0.0-0.5	.17
Weitas-----	0-14	8-16	0.65-0.90	0.6-2	0.20-0.21	0.0-2.9	10-13	.24
	14-22	8-17	0.65-1.00	0.6-2	0.13-0.18	0.0-2.9	8.0-12	.32
	22-37	8-17	1.40-1.50	0.6-2	0.11-0.18	0.0-2.9	7.0-9.0	.15
	37-43	3-10	1.40-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.15
	43-60	6-17	1.40-1.60	2-20	0.05-0.18	0.0-2.9	0.5-1.0	.15
133: Kauder-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-4	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	2.0-6.0	.43
	4-15	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	1.0-2.0	.49
	15-23	16-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.64
	23-34	16-32	1.30-1.55	0.6-2	0.19-0.21	0.0-2.9	0.0-0.5	.55
	34-95	20-38	1.60-1.75	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.49
134: Keeler, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15
Keeler-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15
135: Keeler, moist-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
135: Keeler-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15
136: Keeler-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15
Aldermand-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-15	0.65-0.98	0.6-2	0.16-0.18	0.0-2.9	3.0-9.5	.28
	7-17	8-15	0.65-1.28	0.6-2	0.16-0.18	0.0-2.9	0.5-3.8	.37
	17-25	5-16	1.00-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-1.1	.32
	25-33	3-16	1.15-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-0.9	.28
	33-44	1-14	1.25-1.75	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	44-62	0-4	1.35-1.75	20-100	0.01-0.05	0.0-2.9	0.0-0.5	.05
137: Keeler-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	14-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	7-18	14-17	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.49
	18-38	20-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	38-62	13-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.28
Jacot-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-6	3-9	0.65-0.85	0.6-2	0.19-0.21	0.0-2.9	3.0-6.0	.43
	6-16	3-9	0.65-0.85	0.6-2	0.16-0.21	0.0-2.9	1.0-3.0	.55
	16-42	5-18	1.40-1.60	0.6-6	0.07-0.15	0.0-2.9	0.5-1.0	.15
	42-50	3-10	1.40-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	50-62	3-10	1.40-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.10

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
138:								
Keeler-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15
Lado-----								
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-10	0.65-0.95	2-6	0.21-0.28	0.0-2.9	2.0-8.0	.32
	4-20	8-18	0.65-1.00	2-6	0.21-0.30	0.0-2.9	1.0-4.0	.37
	20-48	17-34	1.30-1.60	0.2-2	0.16-0.21	3.0-5.9	1.0-2.0	.32
	48-64	15-31	1.25-1.60	0.6-2	0.16-0.21	0.0-2.9	0.0-0.5	.37
139:								
Kettenbach-----	0-3	16-27	1.10-1.30	0.6-2	0.13-0.15	3.0-5.9	2.0-4.0	.24
	3-11	18-30	1.15-1.35	0.2-0.6	0.10-0.12	3.0-5.9	1.0-3.0	.17
	11-36	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	36-46	---	---	---	---	---	---	---
Gwin-----	0-4	15-27	1.20-1.35	0.6-2	0.10-0.12	0.0-2.9	2.0-3.0	.24
	4-8	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.15
	8-13	19-37	1.30-1.45	0.2-2	0.07-0.09	0.0-2.9	1.0-2.0	.15
	13-23	---	---	---	---	---	---	---
Rock outcrop-----	0-60	---	---	---	---	---	---	---
140:								
Kettenbach-----	0-3	16-27	1.10-1.30	0.6-2	0.13-0.15	3.0-5.9	2.0-4.0	.24
	3-11	18-30	1.15-1.35	0.2-0.6	0.10-0.12	3.0-5.9	1.0-3.0	.17
	11-36	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	36-46	---	---	---	---	---	---	---
Keuterville-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	15-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.17
	11-21	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.10
	21-52	20-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15
	52-64	24-38	1.40-1.55	0.2-0.6	0.06-0.08	0.0-2.9	0.5-1.0	.05
141:								
Keuterville-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	15-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.17
	11-21	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.10
	21-52	20-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15
	52-64	24-38	1.40-1.55	0.2-0.6	0.06-0.08	0.0-2.9	0.5-1.0	.05

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
142: Keuterville-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	15-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.17
	11-21	18-26	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	1.0-3.0	.10
	21-52	20-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15
	52-64	24-38	1.40-1.55	0.2-0.6	0.06-0.08	0.0-2.9	0.5-1.0	.05
143: Keuterville-----	0-13	18-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.15
	13-49	26-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15
	49-61	20-30	1.40-1.55	0.2-0.6	0.06-0.08	0.0-2.9	0.5-1.0	.15
Rock outcrop-----	0-60	---	---	---	---	---	---	---
144: Klickson-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-15	12-25	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	15-21	18-26	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	1.0-2.0	.24
	21-35	21-35	1.25-1.45	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.24
	35-62	22-40	1.40-1.60	0.06-0.2	0.05-0.11	3.0-5.9	0.0-0.5	.10
145: Klickson-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-15	12-25	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	15-21	18-26	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	1.0-2.0	.24
	21-35	21-35	1.25-1.45	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.24
	35-62	22-40	1.40-1.60	0.06-0.2	0.05-0.11	3.0-5.9	0.0-0.5	.10
146: Klickson-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-15	12-25	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	15-21	18-26	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	1.0-2.0	.24
	21-35	21-35	1.25-1.45	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.24
	35-62	22-40	1.40-1.60	0.06-0.2	0.05-0.11	3.0-5.9	0.0-0.5	.10
Agatha-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-5	8-25	1.20-1.40	0.6-2	0.14-0.19	0.0-2.9	2.0-4.0	.32
	5-9	23-27	1.20-1.50	0.6-2	0.14-0.19	0.0-2.9	1.5-3.0	.17
	9-20	18-31	1.30-1.60	0.6-2	0.10-0.16	0.0-2.9	1.0-2.0	.15
	20-60	22-40	1.40-1.60	0.2-2	0.10-0.14	0.0-2.9	0.5-1.0	.10
	60-70	---	---	---	---	---	---	---

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
147: Klickson-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-15	12-25	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	15-21	18-26	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	1.0-2.0	.24
	21-35	21-35	1.25-1.45	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.24
	35-62	22-40	1.40-1.60	0.06-0.2	0.05-0.11	3.0-5.9	0.0-0.5	.10
Kettenbach-----	0-3	16-27	1.10-1.30	0.6-2	0.13-0.15	3.0-5.9	2.0-4.0	.24
	3-11	18-30	1.15-1.35	0.2-0.6	0.10-0.12	3.0-5.9	1.0-3.0	.17
	11-36	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	36-46	---	---	---	---	---	---	---
148: Klickson-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-15	12-25	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
	15-21	18-26	1.20-1.40	0.6-2	0.12-0.14	0.0-2.9	1.0-2.0	.24
	21-35	21-35	1.25-1.45	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.24
	35-62	22-40	1.40-1.60	0.06-0.2	0.05-0.11	3.0-5.9	0.0-0.5	.10
Rock outcrop-----	0-60	---	---	---	---	---	---	---
Kettenbach-----	0-3	16-27	1.10-1.30	0.6-2	0.13-0.15	3.0-5.9	2.0-4.0	.24
	3-11	18-30	1.15-1.35	0.2-0.6	0.10-0.12	3.0-5.9	1.0-3.0	.17
	11-36	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	36-46	---	---	---	---	---	---	---
149: Konkol-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-3	8-16	0.62-0.95	0.6-2	0.24-0.29	0.0-1.5	2.0-10	.37
	3-10	8-18	0.72-1.17	0.6-2	0.14-0.27	0.0-1.5	1.0-4.0	.37
	10-18	10-23	1.24-1.58	0.6-2	0.15-0.27	0.0-3.0	0.3-2.0	.24
	18-25	14-21	1.20-1.45	0.6-2	0.15-0.21	0.0-3.0	1.0-3.0	.43
Revling-----	25-48	17-36	1.29-1.58	0.6-2	0.15-0.27	0.0-3.0	0.2-1.5	.43
	48-56	17-32	1.29-1.58	0.6-2	0.15-0.27	0.0-3.0	0.1-0.5	.20
	56-64	14-21	1.20-1.45	0.6-2	0.15-0.21	0.0-3.0	1.0-3.0	.43
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.37
150: Kooskia-----	7-21	8-14	0.65-1.00	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.55
	21-35	15-35	1.20-1.40	0.2-2	0.16-0.19	2.0-6.0	0.5-1.0	.49
	35-86	14-40	1.30-1.55	0.06-2	0.12-0.16	0.0-6.0	0.0-0.5	.49
	0-7	15-23	1.10-1.25	0.6-2	0.19-0.21	0.0-2.9	4.0-6.0	.28
	7-11	17-30	1.10-1.25	0.6-2	0.19-0.21	2.0-5.0	1.0-2.0	.49
	11-20	12-26	1.10-1.25	0.6-2	0.19-0.21	2.0-5.0	0.1-1.0	.49
	20-67	35-50	1.40-1.60	0.06-0.2	0.15-0.17	6.0-8.9	0.0-0.5	.37

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
151: Kooskia-----	0-7 7-11 11-20 20-67	15-23 17-30 12-26 35-50	1.10-1.25 1.10-1.25 1.10-1.25 1.40-1.60	0.6-2 0.6-2 0.6-2 0.06-0.2	0.19-0.21 0.19-0.21 0.19-0.21 0.15-0.17	0.0-2.9 2.0-5.0 2.0-5.0 6.0-8.9	4.0-6.0 1.0-2.0 0.1-1.0 0.0-0.5	.28 .49 .49 .37
152: Kruse-----	0-1 1-17 17-50 50-66	0-25 16-24 24-34 14-20	0.10-0.30 1.00-1.20 1.40-1.50 1.40-1.50	6-100 0.6-2 0.2-0.6 2-6	0.30-0.60 0.16-0.18 0.15-0.19 0.10-0.14	--- 0.0-2.9 3.0-5.9 0.0-2.9	60-95 1.0-2.0 0.5-1.0 0.5-1.0	--- .37 .32 .17
153: Kruse-----	0-1 1-6 6-14 14-41 41-48 48-61	0-25 8-20 14-26 15-36 18-26 3-25	0.10-0.30 1.00-1.20 1.40-1.50 1.40-1.50 1.40-1.50	6-100 0.6-2 0.2-0.6 2-6 2-6	0.30-0.60 0.16-0.18 0.15-0.19 0.10-0.14 0.07-0.14	--- 0.0-2.9 0.0-2.9 0.0-3.5 0.0-2.9	28-70 1.0-2.0 0.5-1.0 0.5-1.0 0.0-0.5	--- .37 .37 .17 .17
154: Kruse-----	0-1 1-6 6-14 14-41 41-48 48-61	0-25 8-20 14-26 15-36 18-26 3-25	0.10-0.30 1.00-1.20 1.40-1.50 1.40-1.50 1.40-1.50	6-100 0.6-2 0.6-2 0.2-0.6 2-6 2-6	0.30-0.60 0.16-0.18 0.16-0.18 0.15-0.19 0.10-0.14 0.07-0.14	--- 0.0-2.9 0.0-2.9 3.0-5.9 0.0-3.5 0.0-2.9	28-70 1.0-2.0 0.5-1.0 0.5-1.0 0.5-1.0 0.0-0.5	--- .37 .37 .37 .17 .17
Aldermand-----	0-1 1-2 2-7 7-17 17-25 25-33 33-44 44-62	0-25 0-25 8-15 8-15 5-16 3-16 1-14 0-4	0.10-0.30 0.10-0.30 0.65-0.98 0.65-1.28 1.00-1.65 1.15-1.65 1.25-1.75 1.35-1.75	6-100 6-100 0.6-2 0.6-2 0.6-2 0.6-2 6-20 20-100	0.30-0.60 0.30-0.60 0.16-0.18 0.16-0.18 0.14-0.16 0.14-0.16 0.04-0.06 0.01-0.05	--- --- 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	28-70 19-49 3.0-9.5 0.5-3.8 0.2-1.1 0.2-0.9 0.0-0.5 0.0-0.5	--- --- .28 .37 .32 .28 .10 .05
155: Kruse-----	0-1 1-6 6-14 14-41 41-48 48-61	0-25 8-20 14-26 15-36 18-26 3-25	0.10-0.30 1.00-1.20 1.00-1.20 1.40-1.50 1.40-1.50 1.40-1.50	6-100 0.6-2 0.6-2 0.2-0.6 2-6 2-6	0.30-0.60 0.16-0.18 0.16-0.18 0.15-0.19 0.10-0.14 0.07-0.14	--- 0.0-2.9 0.0-2.9 3.0-5.9 0.0-3.5 0.0-2.9	28-70 1.0-2.0 0.5-1.0 0.5-1.0 0.5-1.0 0.0-0.5	--- .37 .37 .37 .17 .17

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
155: Aldermand-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-15	0.65-0.98	0.6-2	0.16-0.18	0.0-2.9	3.0-9.5	.28
	7-17	8-15	0.65-1.28	0.6-2	0.16-0.18	0.0-2.9	0.5-3.8	.37
	17-25	5-16	1.00-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-1.1	.32
	25-33	3-16	1.15-1.65	0.6-2	0.14-0.16	0.0-2.9	0.2-0.9	.28
	33-44	1-14	1.25-1.75	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.10
	44-62	0-4	1.35-1.75	20-100	0.01-0.05	0.0-2.9	0.0-0.5	.05
156: Kruise-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-6	8-20	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.37
	6-14	14-26	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	14-41	15-36	1.40-1.50	0.2-0.6	0.15-0.19	3.0-5.9	0.5-1.0	.37
	41-48	18-26	1.40-1.50	2-6	0.10-0.14	0.0-3.5	0.5-1.0	.17
	48-61	3-25	1.40-1.50	2-6	0.07-0.14	0.0-2.9	0.0-0.5	.17
McCrosket, dry-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-15	8-18	0.95-1.50	0.6-2	0.15-0.17	0.0-2.9	2.0-4.0	.20
	15-35	12-25	1.00-1.60	0.6-2	0.07-0.09	0.0-2.9	0.0-1.0	.10
	35-48	5-26	1.00-1.60	0.6-2	0.07-0.09	0.0-2.9	0.0-0.5	.10
	48-58	---	---	---	---	---	---	---
157: Kruise-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-6	8-20	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.37
	6-14	14-26	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	14-41	15-36	1.40-1.50	0.2-0.6	0.15-0.19	3.0-5.9	0.5-1.0	.37
	41-48	18-26	1.40-1.50	2-6	0.10-0.14	0.0-3.5	0.5-1.0	.17
	48-61	3-25	1.40-1.50	2-6	0.07-0.14	0.0-2.9	0.0-0.5	.17
Noil-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-20	1.25-1.45	0.6-2	0.09-0.27	0.0-2.9	2.0-9.5	.20
	9-19	5-20	1.30-1.60	0.6-6	0.06-0.19	0.0-2.9	0.3-1.9	.05
	19-29	5-25	1.30-1.60	0.6-6	0.04-0.14	0.0-2.9	0.3-0.5	.05
	29-43	3-14	1.35-1.70	2-6	0.01-0.10	0.0-2.9	0.0-1.1	.05
	43-53	---	---	---	---	---	---	---
158: Kruise-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-6	8-20	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	1.0-2.0	.37
	6-14	14-26	1.00-1.20	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	14-41	15-36	1.40-1.50	0.2-0.6	0.15-0.19	3.0-5.9	0.5-1.0	.37
	41-48	18-26	1.40-1.50	2-6	0.10-0.14	0.0-3.5	0.5-1.0	.17
	48-61	3-25	1.40-1.50	2-6	0.07-0.14	0.0-2.9	0.0-0.5	.17

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
158:								
Teakean-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-13	17-26	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.43
	13-23	22-35	1.30-1.50	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.37
	23-42	22-42	0.95-1.50	0.06-0.6	0.14-0.21	3.0-5.9	0.0-0.8	.24
	42-61	26-39	1.50-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.20
159:								
Larkin-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-21	15-24	1.15-1.30	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.32
	21-62	20-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.1-2.0	.43
Driscoll-----	0-13	16-25	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.28
	13-20	18-35	1.30-1.55	0.6-2	0.19-0.21	3.0-5.9	1.0-3.0	.43
	20-24	11-26	1.40-1.55	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.49
	24-54	35-55	1.45-1.55	0.06-0.2	0.15-0.21	6.0-8.9	0.5-1.0	.37
	54-70	32-50	1.45-1.55	0.06-0.2	0.15-0.19	6.0-8.9	0.0-1.0	.32
160:								
Lebaron-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-9	18-23	0.95-1.50	0.2-0.6	0.18-0.20	0.0-2.9	2.0-4.0	.49
	9-17	12-20	1.20-1.60	0.2-0.6	0.18-0.20	0.0-2.9	0.0-2.0	.55
	17-62	27-44	1.00-1.65	0.06-0.2	0.18-0.20	0.0-2.9	0.0-2.0	.43
Latahco-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-4	15-25	1.15-1.35	0.6-2	0.19-0.21	3.0-5.9	4.0-7.0	.32
	4-12	15-30	1.15-1.35	0.6-2	0.19-0.21	3.0-5.9	2.0-5.0	.37
	12-27	8-22	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.55
	27-62	24-38	1.30-1.50	0.2-0.6	0.17-0.19	3.0-5.9	0.5-1.0	.43
161:								
Lewhand-----	0-8	16-39	0.90-1.25	0.6-2	0.19-0.24	0.5-3.0	4.0-7.0	.37
	8-12	16-35	1.15-1.40	0.2-2	0.19-0.21	0.5-3.0	2.0-4.0	.43
	12-18	10-26	1.25-1.55	0.6-2	0.18-0.20	0.0-3.0	0.5-1.0	.64
	18-32	15-40	1.50-1.75	0.0015-0.06	0.05-0.07	0.0-3.0	0.1-1.0	.55
	32-60	8-44	1.40-1.60	0.2-20	0.08-0.20	0.0-3.0	0.1-1.0	.49
Burnt creek-----	0-7	18-32	1.00-1.30	0.6-2	0.19-0.21	3.0-5.9	3.0-6.0	.20
	7-11	17-34	1.15-1.30	0.6-2	0.19-0.21	3.0-5.9	1.0-3.0	.32
	11-28	16-28	1.15-1.30	0.6-2	0.12-0.20	0.0-2.9	1.0-3.0	.32
	28-36	12-23	1.20-1.45	0.6-6	0.12-0.20	0.0-2.9	0.5-1.0	.37
	36-60	2-21	1.25-1.65	0.6-20	0.05-0.12	0.0-2.9	0.5-1.0	.10



Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion	
	In	Pct	g/cc	In/hr	In/in	Pct	Pct		
162: Lewhand-----	0-8	16-39	0.90-1.25	0.6-2	0.19-0.24	0.5-3.0	4.0-7.0	.37	
	8-12	16-35	1.15-1.40	0.2-2	0.19-0.21	0.5-3.0	2.0-4.0	.43	
	12-18	10-26	1.25-1.55	0.6-2	0.18-0.20	0.0-3.0	0.5-1.0	.64	
	18-32	15-40	1.50-1.75	0.0015-0.06	0.05-0.07	0.0-3.0	0.1-1.0	.55	
	32-60	8-44	1.40-1.60	0.2-20	0.08-0.20	0.0-3.0	0.1-1.0	.49	
		0-7	16-25	1.15-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
Teneb-----	7-24	18-50	1.20-1.45	0.2-0.6	0.19-0.21	3.0-5.9	1.0-2.0	.43	
	24-34	22-29	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.49	
	34-64	15-43	1.20-1.50	0.2-2	0.16-0.21	3.0-5.9	0.5-1.0	.43	
		0-1	0-25	0.10-0.30		0.30-0.60		28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---	
	2-6	12-24	1.00-1.20	0.6-2	0.19-0.21	3.0-5.9	4.0-6.0	.24	
163: Longbar-----	6-12	16-24	1.10-1.30	0.6-2	0.16-0.18	3.0-5.9	2.0-4.0	.32	
	12-28	18-28	1.40-1.60	0.2-2	0.18-0.21	3.0-5.9	1.0-2.0	.32	
	28-41	14-20	1.35-1.55	0.6-6	0.12-0.14	0.0-2.9	0.5-1.0	.20	
	41-50	10-20	1.30-1.50	0.6-6	0.11-0.13	0.0-2.9	0.0-0.5	.32	
	50-62	7-10	1.40-1.60	2-20	0.06-0.09	0.0-2.9	0.0-0.5	.17	
		0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
Bigtalk-----	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24	
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28	
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37	
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20	
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37	
		0-1	0-25	0.10-0.30					
164: Longbar-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---	
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---	
	2-6	12-24	1.00-1.20	0.6-2	0.19-0.21	3.0-5.9	4.0-6.0	.24	
	6-12	16-24	1.10-1.30	0.6-2	0.16-0.18	3.0-5.9	2.0-4.0	.32	
	12-28	18-28	1.40-1.60	0.2-2	0.18-0.21	3.0-5.9	1.0-2.0	.32	
	28-41	14-20	1.35-1.55	0.6-6	0.12-0.14	0.0-2.9	0.5-1.0	.20	
Bigtalk-----	41-50	10-20	1.30-1.50	0.6-6	0.11-0.13	0.0-2.9	0.0-0.5	.32	
	50-62	7-10	1.40-1.60	2-20	0.06-0.09	0.0-2.9	0.0-0.5	.17	
		0-1	0-25	0.10-0.30					
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---	
	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24	
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28	
164: Longbar-----	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37	
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20	
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37	
		0-1	0-25	0.10-0.30					
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---	
	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24	
164: Longbar-----	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28	
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37	
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20	
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37	
		0-1	0-25	0.10-0.30					
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---	
164: Longbar-----	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24	
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28	
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37	
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20	
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37	
		0-1	0-25	0.10-0.30					
164: Longbar-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---	
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---	
	2-6	12-24	1.00-1.20	0.6-2	0.19-0.21	3.0-5.9	4.0-6.0	.24	
	6-12	16-24	1.10-1.30	0.6-2	0.16-0.18	3.0-5.9	2.0-4.0	.32	
	12-28	18-28	1.40-1.60	0.2-2	0.18-0.21	3.0-5.9	1.0-2.0	.32	
	28-41	14-20	1.35-1.55	0.6-6	0.12-0.14	0.0-2.9	0.5-1.0	.20	
Bigtalk-----	41-50	10-20	1.30-1.50	0.6-6	0.11-0.13	0.0-2.9	0.0-0.5	.32	
	50-62	7-10	1.40-1.60	2-20	0.06-0.09	0.0-2.9	0.0-0.5	.17	
		0-1	0-25	0.10-0.30					
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---	
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---	
	2-6	12-24	1.00-1.20	0.6-2	0.19-0.21	3.0-5.9	4.0-6.0	.24	
164: Longbar-----	6-12	16-24	1.10-1.30	0.6-2	0.16-0.18	3.0-5.9	2.0-4.0	.32	
	12-28	18-28	1.40-1.60	0.2-2	0.18-0.21	3.0-5.9	1.0-2.0	.32	
	28-41	14-20	1.35-1.55	0.6-6	0.12-0.14	0.0-2.9	0.5-1.0	.20	
	41-50	10-20	1.30-1.50	0.6-6	0.11-0.13	0.0-2.9	0.0-0.5	.32	
	50-62	7-10	1.40-1.60	2-20	0.06-0.09	0.0-2.9	0.0-0.5	.17	
		0-1	0-25	0.10-0.30					
Bigtalk-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---	
	1-3	14-26	1.10-1.30	0.6-2	0.16-0.19	3.0-5.9	2.0-4.0	.24	
	3-8	16-24	1.15-1.35	0.6-2	0.16-0.19	3.0-5.9	1.0-2.0	.28	
	8-35	17-26	1.25-1.45	0.6-2	0.18-0.21	3.0-5.9	0.5-1.0	.37	
	35-48	15-24	1.30-1.60	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.20	
	48-61	8-22	1.30-1.65	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.37	

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
165: Longpen-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	10-20	1.10-1.35	0.6-2	0.19-0.24	0.0-3.0	3.0-7.0	.37
	6-9	12-25	1.20-1.40	0.6-2	0.19-0.21	0.0-3.0	1.0-3.0	.49
	9-49	20-32	1.35-1.45	0.2-0.6	0.19-0.21	2.0-5.0	0.5-2.0	.49
	49-71	27-41	1.30-1.50	0.06-0.2	0.15-0.17	4.0-6.0	0.0-0.5	.43
166: Longpen-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	10-20	1.10-1.35	0.6-2	0.19-0.24	0.0-3.0	3.0-7.0	.37
	6-9	12-25	1.20-1.40	0.6-2	0.19-0.21	0.0-3.0	1.0-3.0	.49
	9-49	20-32	1.35-1.45	0.2-0.6	0.19-0.21	2.0-5.0	0.5-2.0	.49
	49-71	27-41	1.30-1.50	0.06-0.2	0.15-0.17	4.0-6.0	0.0-0.5	.43
167: Meland-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-16	18-27	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	4.0-6.0	.28
	16-35	27-35	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.5-2.0	.28
	35-45	---	---	---	---	---	---	---
Jacket-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-7	22-26	1.10-1.30	0.6-2	0.19-0.23	0.0-2.9	4.0-6.0	.28
	7-27	28-35	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	1.0-3.0	.37
	27-56	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.5-1.0	.37
	56-63	35-50	1.30-1.50	0.06-0.2	0.13-0.16	6.0-8.9	0.0-0.5	.37
168: Meland-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-16	18-27	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	4.0-6.0	.28
	16-35	27-35	1.40-1.60	0.2-0.6	0.18-0.20	3.0-5.9	0.5-2.0	.28
	35-45	---	---	---	---	---	---	---
Keuterville-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-13	18-25	1.20-1.35	0.6-2	0.12-0.14	0.0-2.9	4.0-6.0	.15
	13-49	26-35	1.40-1.55	0.2-0.6	0.06-0.10	0.0-2.9	0.5-2.0	.15
	49-61	20-30	1.40-1.55	0.2-0.6	0.06-0.08	0.0-2.9	0.5-1.0	.15
169: Mushel-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
	48-68	2-24	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.24

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
169: Brodeer-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-12	0.65-0.90	2-6	0.20-0.30	0.0-2.9	2.0-6.0	.37
	4-21	8-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.49
	21-59	11-24	1.30-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.43
170: Mushel-----	59-67	3-22	1.35-1.45	0.6-6	0.13-0.15	0.0-2.9	0.0-0.5	.24
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-6	8-14	0.85-0.95	2-6	0.20-0.25	0.0-2.9	2.0-9.0	.32
	6-13	7-16	0.85-0.95	2-6	0.20-0.25	0.0-2.9	1.0-2.0	.49
	13-21	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.5-1.0	.43
	21-39	9-23	1.30-1.60	0.6-2	0.15-0.17	0.0-2.9	0.0-0.5	.43
Dullaxe-----	39-48	10-18	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.43
	48-68	2-24	1.25-1.50	0.6-6	0.10-0.13	0.0-2.9	0.0-0.5	.24
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-12	0.65-0.95	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.43
	7-19	8-12	0.65-1.00	0.6-2	0.15-0.25	0.0-2.9	1.0-3.0	.43
	19-27	10-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.5-1.0	.49
171: Nakarna, high precipitation-----	27-38	5-18	1.30-1.65	0.6-6	0.12-0.24	0.0-2.9	0.0-0.5	.24
	38-46	5-17	1.40-1.65	2-6	0.12-0.16	0.0-2.9	0.0-0.5	.24
	46-66	2-12	1.40-1.80	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.15
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-4	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.49
172: Nakarna, high precipitation-----	4-16	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	16-36	14-18	1.30-1.50	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	36-49	2-6	1.40-1.55	2-6	0.07-0.13	0.0-2.9	0.0-0.5	.28
	49-59	---	---	---	---	---	---	---
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.37
	5-15	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	15-34	4-18	1.30-1.50	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.37
	34-42	2-15	1.40-1.55	2-6	0.07-0.13	0.0-2.9	0.0-0.5	.24
	42-52	---	---	---	---	---	---	---

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
173: Nakarna-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.37
	5-15	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	15-34	4-18	1.30-1.50	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.37
	34-42	2-15	1.40-1.55	2-6	0.07-0.13	0.0-2.9	0.0-0.5	.24
	42-52	---	---	---	---	---	---	---
Nakarna, warm-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.37
	5-15	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	15-34	4-18	1.30-1.50	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.37
	34-42	2-15	1.40-1.55	2-6	0.07-0.13	0.0-2.9	0.0-0.5	.24
	42-52	---	---	---	---	---	---	---
174: Narnett-----	0-9	8-12	0.65-0.85	0.6-2	0.20-0.21	0.0-2.9	2.0-5.0	.49
	9-15	17-24	1.40-1.60	0.6-2	0.19-0.20	0.0-2.9	0.5-1.0	.55
	15-50	16-32	1.40-1.60	0.2-0.6	0.19-0.21	3.0-5.9	0.0-0.5	.55
	50-58	18-29	1.40-1.60	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.49
	58-80	9-25	1.40-1.60	0.6-6	0.07-0.12	0.0-2.9	0.0-0.5	.20
Jury-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-6	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	3.0-6.0	.32
	6-29	8-10	0.75-0.95	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	29-48	5-22	1.40-1.50	2-6	0.08-0.13	0.0-2.9	1.0-2.0	.28
	48-62	2-20	1.30-1.65	0.6-20	0.06-0.10	0.0-2.9	0.0-0.5	.17
175: Neva-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-10	0.62-0.92	0.6-2	0.24-0.29	0.0-2.9	3.5-15	.32
	4-13	8-10	0.72-1.17	0.6-2	0.14-0.27	0.0-3.0	1.0-4.0	.49
	13-25	17-26	1.27-1.57	0.6-2	0.16-0.24	0.0-3.0	0.5-2.0	.37
	25-50	17-28	1.27-1.57	0.6-2	0.12-0.24	0.0-3.0	0.5-1.2	.37
	50-56	19-22	1.27-1.57	0.6-2	0.16-0.24	0.0-3.0	0.2-0.5	.37
	56-62	12-22	1.27-1.57	0.2-2	0.11-0.20	0.0-3.0	0.0-0.3	.20
176: Newlig-----	0-3	14-19	1.15-1.45	0.6-6	0.13-0.21	0.0-3.0	2.0-4.0	.37
	3-18	14-21	1.20-1.40	0.6-2	0.16-0.21	0.0-3.0	1.0-3.0	.43
	18-22	14-21	1.20-1.45	0.6-2	0.15-0.21	0.0-3.0	1.0-3.0	.43
	22-30	16-25	1.25-1.40	0.6-2	0.16-0.18	3.0-6.0	0.5-2.0	.37
	30-55	18-29	1.30-1.45	0.2-2	0.15-0.21	3.0-6.0	0.5-1.0	.32
	55-65	14-20	1.30-1.50	0.6-6	0.11-0.18	0.0-3.0	0.5-1.0	.37

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
177: Noil-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-20	1.25-1.45	0.6-2	0.09-0.27	0.0-2.9	2.0-9.5	.20
	9-19	5-20	1.30-1.60	0.6-6	0.06-0.19	0.0-2.9	0.3-1.9	.05
	19-29	5-25	1.30-1.60	0.6-6	0.04-0.14	0.0-2.9	0.3-0.5	.05
	29-43	3-14	1.35-1.70	2-6	0.01-0.10	0.0-2.9	0.0-1.1	.05
Keeler-----	43-53	---	---	---	---	---	---	---
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	8-17	1.00-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	5-12	10-21	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	12-39	15-30	1.50-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.37
	39-48	12-34	1.50-1.65	0.2-2	0.13-0.16	0.0-2.9	0.0-0.5	.15
178: Noil-----	48-74	5-19	1.50-1.65	0.6-6	0.13-0.16	0.0-2.9	0.0-0.5	.15
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-9	8-20	1.25-1.45	0.6-2	0.09-0.27	0.0-2.9	2.0-9.5	.20
	9-19	5-20	1.30-1.60	0.6-6	0.06-0.19	0.0-2.9	0.3-1.9	.05
	19-29	5-25	1.30-1.60	0.6-6	0.04-0.14	0.0-2.9	0.3-0.5	.05
	29-43	3-14	1.35-1.70	2-6	0.01-0.10	0.0-2.9	0.0-1.1	.05
Bouldercreek, warm----	43-53	---	---	---	---	---	---	---
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-16	0.65-0.90	0.6-2	0.18-0.31	0.0-2.9	3.0-6.0	.32
	8-21	8-16	0.65-1.00	0.6-2	0.14-0.31	0.0-2.9	1.0-3.0	.43
	21-27	6-20	1.15-1.65	0.6-2	0.06-0.15	0.0-2.9	0.5-1.0	.24
	27-34	6-20	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
Rock outcrop-----	34-53	6-16	1.15-1.65	2-6	0.06-0.15	0.0-2.9	0.1-0.5	.05
	53-69	2-14	1.20-1.70	2-6	0.04-0.12	0.0-2.9	0.1-0.5	.05
	0-60	---	---	---	---	---	---	---
	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	50-95	---
	3-6	8-10	0.62-0.91	0.6-4	0.35-0.45	1.0-2.9	2.0-15	.37
	6-17	8-10	0.66-0.87	0.6-4	0.35-0.45	1.0-2.9	1.2-4.1	.43
179: Norwidge, moist-----	17-26	15-23	1.35-1.70	0.1-1	0.20-0.20	1.0-4.5	0.2-1.2	.55
	26-42	20-32	1.34-1.75	0.2-1	0.20-0.20	3.0-5.9	0.4-0.7	.49
	42-81	18-39	1.57-1.72	0.2-0.6	0.18-0.20	3.0-7.9	0.1-0.6	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.85	0.6-2	0.21-0.25	0.0-2.9	4.0-6.0	.37
	3-18	8-10	0.65-0.90	0.6-2	0.21-0.24	0.0-2.9	1.0-4.0	.49
Threebear, moist-----	18-26	15-25	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.43
	26-40	18-28	1.45-1.55	0.6-2	0.18-0.21	3.0-5.9	0.1-1.0	.49
	40-69	21-32	1.55-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.1-1.0	.49
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.85	0.6-2	0.21-0.25	0.0-2.9	4.0-6.0	.37
	3-18	8-10	0.65-0.90	0.6-2	0.21-0.24	0.0-2.9	1.0-4.0	.49

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
180: Odonnell-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-5	8-12	0.65-0.90	0.6-2	0.19-0.23	0.0-2.9	3.0-6.0	.43
	5-16	8-14	0.65-1.00	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.49
	16-25	16-26	1.25-1.65	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.49
	25-44	17-30	1.25-1.65	0.06-0.6	0.16-0.21	0.0-2.9	0.0-0.5	.49
	44-64	19-40	1.25-1.65	0.06-0.2	0.16-0.21	0.0-2.9	0.0-0.5	.49
Grandad-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
181: Odonnell-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	3-7	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-10	.49
	7-17	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	17-25	16-26	1.50-1.70	0.2-0.6	0.16-0.21	0.0-2.9	0.5-1.0	.49
	25-53	24-34	1.50-1.70	0.06-0.2	0.16-0.21	0.0-2.9	0.0-0.5	.49
	53-63	18-27	1.50-1.70	0.2-0.6	0.13-0.21	0.0-2.9	0.0-0.5	.49
182: Oxyaquic Xerofluvents, occasionally flooded	0-6	1-19	1.31-1.69	2-6	0.16-0.25	0.0-2.9	1.0-3.0	.28
	6-17	1-10	1.32-1.70	2-6	0.05-0.15	0.0-2.9	0.5-1.0	.24
	17-18	3-5	1.32-1.75	2-6	0.12-0.20	0.0-2.9	0.5-2.0	.55
	18-39	0-3	1.32-1.75	2-6	0.10-0.18	0.0-2.9	0.5-1.0	.37
	39-41	3-5	1.32-1.75	2-6	0.12-0.20	0.0-2.9	0.5-2.0	.55
	41-60	0-4	1.32-1.75	2-20	0.03-0.16	0.0-2.9	0.0-0.5	.10
183: Pits, quarry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	8-17	1.15-1.60	2-6	0.09-0.18	0.0-3.0	2.0-4.0	.15
	4-12	2-14	1.35-1.70	6-20	0.05-0.15	0.0-3.0	1.0-3.0	.28
	12-47	2-13	1.35-1.65	6-20	0.05-0.14	0.0-3.0	1.0-3.0	.20
	47-60	1-11	1.40-1.65	6-20	0.02-0.11	0.0-3.0	1.0-3.0	.02
	0-60	---	---	---	---	---	---	---

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
184: Placer-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-5	8-17	0.85-1.35	0.6-2	0.16-0.18	0.0-2.9	1.0-3.0	.37
	5-10	10-19	0.85-1.35	0.6-2	0.16-0.18	0.0-2.9	0.8-2.0	.37
	10-31	19-32	1.35-1.50	0.6-2	0.12-0.18	0.0-2.9	0.5-1.0	.37
	31-52	18-25	1.35-1.50	0.6-2	0.05-0.11	0.0-2.9	0.0-0.5	.32
Dowper-----	52-62	---	---	---	---	---	---	---
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-4	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	4-6	8-10	0.65-0.90	2-6	0.20-0.24	0.0-2.9	2.0-5.0	.43
	6-21	8-10	0.65-1.00	2-6	0.14-0.20	0.0-2.9	1.0-3.0	.43
	21-58	19-29	1.25-1.40	0.2-2	0.07-0.16	3.0-5.9	0.5-1.0	.49
Grangemont-----	58-65	21-31	1.20-1.40	0.2-2	---	---	0.0-0.5	.32
	65-75	---	---	---	---	---	---	---
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
185: Poorman, dry-----	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.25	0.0-2.9	3.0-7.0	.28
	3-13	8-10	0.75-1.00	0.6-2	0.20-0.25	0.0-2.9	1.0-4.0	.43
	13-29	12-20	1.25-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
186: Poorman, dry-----	29-36	12-16	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	36-52	8-17	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	52-61	8-20	1.40-1.60	2-6	0.08-0.14	0.0-2.9	0.1-1.0	.28
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.25	0.0-2.9	3.0-7.0	.28
	3-13	8-10	0.75-1.00	0.6-2	0.20-0.25	0.0-2.9	1.0-4.0	.43
	13-29	12-20	1.25-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	29-36	12-16	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	36-52	8-17	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	52-61	8-20	1.40-1.60	2-6	0.08-0.14	0.0-2.9	0.1-1.0	.28
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.25	0.0-2.9	3.0-7.0	.28

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
186: Poorman-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.25	0.0-2.9	3.0-7.0	.28
	3-13	8-10	0.75-1.00	0.6-2	0.20-0.25	0.0-2.9	1.0-4.0	.43
	13-29	12-20	1.25-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	29-36	12-16	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	36-52	8-17	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	52-61	8-20	1.40-1.60	2-6	0.08-0.14	0.0-2.9	0.1-1.0	.28
187: Poorman-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.25	0.0-2.9	3.0-7.0	.28
	3-13	8-10	0.75-1.00	0.6-2	0.20-0.25	0.0-2.9	1.0-4.0	.43
	13-29	12-20	1.25-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	29-36	12-16	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	36-52	8-17	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	52-61	8-20	1.40-1.60	2-6	0.08-0.14	0.0-2.9	0.1-1.0	.28
Grandad-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
188: Poorman-----	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.25	0.0-2.9	3.0-7.0	.28
	3-13	8-10	0.75-1.00	0.6-2	0.20-0.25	0.0-2.9	1.0-4.0	.43
	13-29	12-20	1.25-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	29-36	12-16	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	36-52	8-17	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
Grandad-----	52-61	8-20	1.40-1.60	2-6	0.08-0.14	0.0-2.9	0.1-1.0	.28
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
Grandad-----	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
Grandad-----	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
Grandad-----	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
Grandad-----	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
Grandad-----	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
Grandad-----	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24



Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
189: Poorman-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.30	0.0-2.9	3.0-7.0	.28
	3-13	8-10	0.75-1.00	0.6-2	0.20-0.25	0.0-2.9	1.0-4.0	.43
	13-29	12-20	1.25-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	29-36	12-16	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	36-52	8-17	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	52-61	8-20	1.40-1.60	2-6	0.08-0.14	0.0-2.9	0.1-1.0	.28
Grandad, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
190: Poorman-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	6-10	0.65-0.95	0.6-2	0.20-0.25	0.0-2.9	3.0-7.0	.28
	3-13	8-10	0.75-1.00	0.6-2	0.20-0.25	0.0-2.9	1.0-4.0	.43
	13-29	12-20	1.25-1.40	0.6-2	0.16-0.18	0.0-2.9	0.5-1.0	.37
	29-36	12-16	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	36-52	8-17	1.30-1.50	0.6-6	0.12-0.17	0.0-2.9	0.1-1.0	.28
	52-61	8-20	1.40-1.60	2-6	0.08-0.14	0.0-2.9	0.1-1.0	.28
Grandad, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
191: Reggear-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-23	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	2.0-4.0	.43
	8-13	8-25	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	1.0-3.0	.55
	13-22	16-26	1.20-1.55	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.55
	22-31	17-33	1.50-1.65	0.2-0.6	0.19-0.21	3.0-5.9	0.0-0.5	.55
	31-60	22-45	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55
	60-86	19-38	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
191: Kauder	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-4	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	2.0-6.0	.43
	4-15	5-12	0.90-1.00	0.6-2	0.21-0.23	0.0-2.9	1.0-2.0	.49
	15-23	16-20	1.30-1.50	0.6-2	0.20-0.22	0.0-2.9	0.5-1.0	.64
	23-34	16-32	1.30-1.55	0.6-2	0.19-0.21	0.0-2.9	0.0-0.5	.55
	34-95	20-38	1.60-1.75	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.49
192: Reggear	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-23	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	2.0-4.0	.43
	8-13	8-25	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	1.0-3.0	.55
	13-22	16-26	1.20-1.55	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.55
	22-31	17-33	1.50-1.65	0.2-0.6	0.19-0.21	3.0-5.9	0.0-0.5	.55
	31-60	22-45	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55
	60-86	19-38	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55
Sedgow	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.32
	3-5	20-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-2.0	.43
	5-13	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.49
	13-35	14-35	1.35-1.45	0.2-2	0.15-0.17	3.0-5.9	0.5-1.0	.43
	35-44	24-36	1.40-1.50	0.2-2	0.09-0.13	0.0-2.9	0.0-0.5	.20
	44-54	---	---	---	---	---	---	---
193: Rettig, high elevation	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
194: Rettig	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
195: Rettig, cold-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
196: Rettig, cool-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
Rettig, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
197: Rettig-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
Grandad-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
198: Rettig, warm, dry-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.90	0.6-2	0.19-0.31	0.0-2.9	3.0-6.0	.43
Township-----	3-17	8-10	0.65-1.00	0.6-2	0.18-0.28	0.0-2.9	1.0-3.0	.55
	17-35	10-25	1.45-1.65	0.6-2	0.08-0.09	0.0-2.9	0.5-1.0	.15
	35-43	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	43-53	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	53-66	12-20	1.10-1.25	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.05
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.90	0.6-2	0.19-0.31	0.0-2.9	3.0-6.0	.43
	3-17	8-10	0.65-1.00	0.6-2	0.18-0.28	0.0-2.9	1.0-3.0	.55
	17-35	10-25	1.45-1.65	0.6-2	0.08-0.09	0.0-2.9	0.5-1.0	.15
	35-43	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
199: Rettig-----	43-53	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	53-66	12-20	1.10-1.25	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.05
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
Township, wet-----	1-3	8-10	0.65-0.90	0.6-2	0.19-0.31	0.0-2.9	3.0-6.0	.43
	3-17	8-10	0.65-1.00	0.6-2	0.18-0.28	0.0-2.9	1.0-3.0	.55
	17-35	10-25	1.45-1.65	0.6-2	0.08-0.09	0.0-2.9	0.5-1.0	.15
	35-43	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	43-53	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	53-66	12-20	1.10-1.25	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.05
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.90	0.6-2	0.19-0.31	0.0-2.9	3.0-6.0	.43
	3-17	8-10	0.65-1.00	0.6-2	0.18-0.28	0.0-2.9	1.0-3.0	.55
	17-35	10-25	1.45-1.65	0.6-2	0.08-0.09	0.0-2.9	0.5-1.0	.15
Stepoff-----	35-43	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	43-53	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	53-66	12-20	1.10-1.25	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.05
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	3-8	8-12	0.65-0.90	0.6-2	0.18-0.30	0.0-2.9	4.0-8.0	.32
	8-24	8-18	0.65-1.00	0.6-2	0.18-0.30	0.0-2.9	3.0-6.0	.32
	24-38	14-22	1.30-1.55	0.6-2	0.06-0.18	0.0-2.9	0.5-3.0	.24
	38-46	14-22	1.30-1.55	0.6-20	0.04-0.18	0.0-2.9	0.5-2.0	.24
	46-63	2-18	1.40-1.65	2-20	0.04-0.11	0.0-2.9	0.5-1.0	.10
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
200: Riswold-----	0-1	0-25	0.10-0.30					
	1-9	8-15	0.75-0.95	6-100	0.30-0.60	---	28-70	---
	9-17	8-16	0.90-1.00	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	0-1	0-25	0.10-0.30				28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-5	8-10	0.65-0.90	0.6-2	0.24-0.29	0.0-3.0	3.0-7.0	.37
Cranberry-----	5-11	8-10	0.65-1.00	0.6-2	0.20-0.24	0.0-3.0	1.0-3.0	.55
	11-16	8-10	0.65-1.00	0.6-2	0.20-0.24	0.0-3.0	1.0-3.0	.55
	16-22	15-28	1.20-1.45	0.6-2	0.19-0.21	3.0-6.0	0.5-1.0	.49
	22-32	18-26	1.15-1.35	0.6-2	0.19-0.21	3.0-6.0	0.0-0.5	.49
	32-40	18-32	1.20-1.45	0.6-2	0.19-0.21	3.0-6.0	0.0-0.5	.43
	40-50	18-30	1.20-1.45	0.6-2	0.17-0.19	3.0-6.0	0.0-0.5	.49
	50-57	20-38	1.20-1.45	0.6-2	0.14-0.19	3.0-6.0	0.0-0.5	.43
	57-62	16-32	1.20-1.45	0.2-0.6	0.16-0.21	3.0-6.0	0.0-0.5	.43
	0-1	0-25	0.10-0.30				28-70	---
	1-9	8-15	0.75-0.95	6-100	0.30-0.60	---	19-49	---
201: Riswold-----	9-17	8-16	0.90-1.00	0.6-2	0.20-0.21	0.0-2.9	2.0-4.0	.43
	17-27	16-25	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.55
	27-44	18-30	1.40-1.60	0.2-0.6	0.14-0.18	3.0-5.9	0.5-1.0	.49
	44-60	22-30	1.45-1.65	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.24
	60-72	24-35	1.25-1.45	0.2-0.6	0.06-0.12	3.0-5.9	1.0-2.0	.10
	0-2	0-25	0.10-0.30				28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
Grangemont-----	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
	0-2	0-25	0.10-0.30				28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
	0-2	0-25	0.10-0.30				28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
202: Rock outcrop-----	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
	0-2	0-25	0.10-0.30				28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
	0-2	0-25	0.10-0.30				28-70	---
Whiskeycreek-----	4-9	2-10	1.40-1.60	2-20	0.04-0.08	0.0-2.9	0.5-2.0	.32
	9-15	2-5	1.40-1.70	6-20	0.03-0.08	0.0-2.9	0.5-1.0	.15
	15-25	---	---	---	---	---	---	---
	0-4	4-15	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	2.0-4.0	.24
	4-9	2-10	1.40-1.60	2-20	0.04-0.08	0.0-2.9	0.5-2.0	.32
	9-15	2-5	1.40-1.70	6-20	0.03-0.08	0.0-2.9	0.5-1.0	.15
	15-25	---	---	---	---	---	---	---
	0-4	4-15	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	2.0-4.0	.24
	4-9	2-10	1.40-1.60	2-20	0.04-0.08	0.0-2.9	0.5-2.0	.32
	9-15	2-5	1.40-1.70	6-20	0.03-0.08	0.0-2.9	0.5-1.0	.15

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
202: Texascreek, dry-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-13	8-18	1.25-1.40	0.6-2	0.15-0.17	0.0-2.9	2.0-4.0	.32
	13-25	5-19	1.25-1.45	0.6-6	0.12-0.29	0.0-2.9	1.0-3.0	.20
	25-33	3-15	1.35-1.55	0.6-6	0.08-0.13	0.0-2.9	0.5-2.0	.20
	33-43	---	---	---	---	---	---	---
203: Scaler-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-2	8-10	0.65-1.20	0.6-2	0.14-0.29	1.0-2.9	1.0-6.0	.37
	2-11	8-10	0.65-1.20	0.6-2	0.14-0.29	1.0-2.9	0.5-2.0	.49
	11-18	15-20	1.27-1.64	0.6-2	0.12-0.27	1.0-2.9	0.5-1.0	.55
	18-30	12-22	1.27-1.64	0.6-2	0.12-0.27	1.0-2.9	0.5-1.0	.49
204: Scaler-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-2	8-10	0.65-1.20	0.6-2	0.14-0.29	1.0-2.9	1.0-6.0	.37
	2-11	8-10	0.65-1.20	0.6-2	0.14-0.29	1.0-2.9	0.5-2.0	.49
	11-18	15-20	1.27-1.64	0.6-2	0.12-0.27	1.0-2.9	0.5-1.0	.55
	18-30	12-22	1.27-1.64	0.6-2	0.12-0.27	1.0-2.9	0.5-1.0	.49
Grandad-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-3	7-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.37
	3-19	7-12	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	19-30	12-23	1.15-1.60	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.49
	30-39	11-23	1.15-1.65	0.6-6	0.10-0.18	0.0-2.9	0.0-0.5	.24
205: Scaler-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	39-45	13-23	1.15-1.65	0.6-6	0.05-0.15	0.0-2.9	0.0-0.5	.37
	45-58	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.55
	58-64	3-19	1.20-1.70	2-20	0.03-0.13	0.0-2.9	0.0-0.5	.24
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-2	8-10	0.65-1.20	0.6-2	0.14-0.29	1.0-2.9	1.0-6.0	.37

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
205: Grangemont-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-7	8-10	0.65-0.95	0.6-2	0.15-0.35	0.0-2.9	3.5-14	.37
	7-14	8-10	0.75-1.20	0.6-2	0.15-0.35	0.0-2.9	1.0-3.8	.55
	14-38	13-30	1.50-1.65	0.6-2	0.16-0.24	0.0-2.9	0.3-1.1	.49
206: Scand-----	38-95	15-32	1.50-1.60	0.2-2	0.12-0.24	0.0-2.9	0.3-1.1	.43
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-4	8-10	0.65-0.90	0.6-2	0.19-0.21	0.0-3.0	3.0-6.0	.37
	4-16	8-10	0.65-1.00	0.6-2	0.19-0.21	0.0-3.0	1.0-3.0	.55
	16-27	15-24	0.95-1.60	0.6-2	0.16-0.21	0.0-4.0	0.5-1.0	.49
	27-53	17-25	0.85-1.60	0.6-2	0.16-0.21	0.0-4.0	0.5-1.0	.49
Scaler-----	53-63	10-24	1.15-1.70	0.6-6	0.06-0.18	0.0-4.0	0.0-0.5	.20
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	1-2	8-10	0.65-1.20	0.6-2	0.14-0.29	1.0-2.9	1.0-6.0	.37
	2-11	8-10	0.65-1.20	0.6-2	0.14-0.29	1.0-2.9	0.5-2.0	.49
	11-18	15-20	1.27-1.64	0.6-2	0.12-0.27	1.0-2.9	0.5-1.0	.55
	18-30	12-22	1.27-1.64	0.6-2	0.12-0.27	1.0-2.9	0.5-1.0	.49
207: Seddown-----	30-40	12-33	1.27-1.64	0.2-2	0.12-0.27	3.0-5.9	0.1-0.5	.49
	40-48	10-33	1.27-1.55	0.2-2	0.16-0.24	3.0-5.9	0.1-0.5	.55
	48-65	5-19	1.30-1.65	2-6	0.10-0.20	1.0-2.9	0.1-0.5	.17
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.32
	3-5	20-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-2.0	.43
208: Seddown-----	5-13	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.49
	13-35	14-35	1.35-1.45	0.2-2	0.15-0.17	3.0-5.9	0.5-1.0	.43
	35-44	24-36	1.40-1.50	0.2-2	0.09-0.13	0.0-2.9	0.0-0.5	.20
	44-54	---	---	---	---	---	---	---
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.32
209: Seddown-----	3-5	20-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-2.0	.43
	5-13	14-24	1.20-1.40	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.49
	13-35	14-35	1.35-1.45	0.2-2	0.15-0.17	3.0-5.9	0.5-1.0	.43
	35-44	24-36	1.40-1.50	0.2-2	0.09-0.13	0.0-2.9	0.0-0.5	.20
	44-54	---	---	---	---	---	---	---
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
209: Sedow-----	0-1 1-3 3-5 5-13 13-35 35-44 44-54	0-25 14-24 20-24 14-24 14-35 24-36 ---	0.10-0.30 1.20-1.40 1.20-1.40 1.20-1.40 1.35-1.45 1.40-1.50 ---	6-100 0.6-2 0.6-2 0.6-2 0.2-2 0.2-2 ---	0.30-0.60 0.19-0.21 0.19-0.21 0.19-0.21 0.15-0.17 0.09-0.13 ---	--- 0.0-2.9 0.0-2.9 0.0-2.9 3.0-5.9 0.0-2.9 ---	28-70 1.0-3.0 0.5-2.0 0.5-1.0 0.5-1.0 0.0-0.5 ---	--- .32 .43 .49 .43 .20 ---
210: Setters-----	0-2 2-15 15-28 28-34 34-62	0-25 14-25 15-26 10-20 36-45	0.10-0.30 1.30-1.50 1.30-1.50 1.30-1.60 1.40-1.60	6-100 0.6-2 0.6-2 0.06-2 0.06-0.2	0.30-0.60 0.19-0.24 0.19-0.24 0.19-0.24 0.15-0.19	--- 0.0-2.9 0.0-2.9 3.0-6.0 6.0-8.9	60-95 3.0-5.0 1.0-4.0 0.5-1.0 0.5-1.0	--- .28 .43 .55 .37
211: Shattuck-----	0-2 2-7 7-19 19-30 30-63	0-25 8-10 8-15 14-29 28-35	0.10-0.30 0.50-0.90 0.65-1.00 1.05-1.70 1.20-1.40	6-100 0.6-2 0.6-2 0.2-2 0.2-0.6	0.30-0.60 0.14-0.45 0.14-0.45 0.04-0.17 0.06-0.08	--- 0.0-2.9 0.0-2.9 0.0-4.0 3.0-5.9	28-70 3.0-6.0 1.0-3.0 0.5-2.0 1.0-2.0	--- .43 .55 .24 .10
212: Shattuck-----	0-2 2-7 7-19 19-30 30-63	0-25 8-10 8-15 14-29 28-35	0.10-0.30 0.50-0.90 0.65-1.00 1.05-1.70 1.20-1.40	6-100 0.6-2 0.6-2 0.2-2 0.2-0.6	0.30-0.60 0.14-0.45 0.14-0.45 0.04-0.17 0.06-0.08	--- 0.0-2.9 0.0-2.9 0.0-4.0 3.0-5.9	28-70 3.0-6.0 1.0-3.0 0.5-2.0 1.0-2.0	--- .43 .55 .24 .10
213: Shattuck, moist-----	0-2 2-7 7-19 19-30 30-63	0-25 8-10 8-15 14-29 28-35	0.10-0.30 0.50-0.90 0.65-1.00 1.05-1.70 1.20-1.40	6-100 0.6-2 0.6-2 0.2-2 0.2-0.6	0.30-0.60 0.14-0.45 0.14-0.45 0.04-0.17 0.06-0.08	--- 0.0-2.9 0.0-2.9 0.0-4.0 3.0-5.9	28-70 3.0-6.0 1.0-3.0 0.5-2.0 1.0-2.0	--- .43 .55 .24 .10
214: Shattuck, moist-----	0-2 2-7 7-19 19-30 30-63	0-25 8-10 8-15 14-29 28-35	0.10-0.30 0.50-0.90 0.65-1.00 1.05-1.70 1.20-1.40	6-100 0.6-2 0.6-2 0.2-2 0.2-0.6	0.30-0.60 0.14-0.45 0.14-0.45 0.04-0.17 0.06-0.08	--- 0.0-2.9 0.0-2.9 0.0-4.0 3.0-5.9	28-70 3.0-6.0 1.0-3.0 0.5-2.0 1.0-2.0	--- .43 .55 .24 .10



Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
214: Dworshak, moist-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
	11-18	8-10	0.65-1.00	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.55
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
215: Shattuck-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-7	8-10	0.50-0.90	0.6-2	0.14-0.45	0.0-2.9	3.0-6.0	.43
	7-19	8-15	0.65-1.00	0.6-2	0.14-0.45	0.0-2.9	1.0-3.0	.55
	19-30	14-29	1.05-1.70	0.2-2	0.04-0.17	0.0-4.0	0.5-2.0	.24
	30-63	28-35	1.20-1.40	0.2-0.6	0.06-0.08	3.0-5.9	1.0-2.0	.10
Dworshak-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	3-11	8-10	0.65-0.90	0.6-2	0.19-0.24	0.0-2.9	3.0-8.0	.37
	11-18	8-10	0.65-1.00	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.55
	18-31	16-27	1.25-1.40	0.2-2	0.16-0.18	3.0-5.9	0.2-2.0	.37
	31-63	18-34	1.25-1.40	0.2-0.6	0.12-0.13	3.0-5.9	0.0-0.6	.15
216: Sly-----	0-4	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	4-8	8-25	1.10-1.40	0.6-2	0.17-0.21	0.0-3.0	2.0-4.0	.37
	8-19	8-30	1.10-1.50	0.2-2	0.17-0.21	0.0-4.0	1.0-2.0	.43
	19-28	22-34	1.10-1.50	0.2-2	0.14-0.21	2.0-4.0	0.5-1.0	.43
	28-37	28-37	1.30-1.55	0.2-0.6	0.10-0.11	3.0-6.0	0.5-1.0	.37
	37-66	20-35	1.25-1.60	0.2-2	0.12-0.21	2.0-6.0	0.0-0.5	.17
Wilkins-----	0-15	18-27	1.10-1.25	0.6-2	0.18-0.22	3.0-5.9	3.0-6.0	.28
	15-20	10-20	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.55
	20-52	40-50	1.20-1.30	0.0000-0.06	0.12-0.18	9.0-25.0	0.0-0.5	.37
	52-64	27-40	1.25-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.0-0.5	.32
217: Southwick-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-17	15-26	1.40-1.50	0.6-2	0.19-0.21	0.0-2.9	2.0-5.0	.37
	17-26	10-23	1.45-1.55	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.55
	26-61	23-38	1.60-1.80	0.0015-0.06	0.05-0.07	3.0-5.9	0.5-1.0	.49
218: Southwick-----	0-9	18-26	1.15-1.45	0.6-2	0.18-0.24	3.0-5.9	2.0-5.0	.37
	9-26	20-27	1.25-1.50	0.6-2	0.18-0.24	3.0-5.9	0.7-2.0	.49
	26-32	12-20	1.35-1.55	0.6-2	0.18-0.24	0.0-2.9	0.2-1.0	.64
	32-46	27-34	1.60-1.80	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.49
	46-64	30-38	1.45-1.65	0.2-0.6	0.10-0.20	3.0-5.9	0.0-0.5	.43

Table 27.-Physical Properties-Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	Kw
218: Larkin	0-19	15-24	1.15-1.30	0.6-2	0.19-0.21	0.0-2.9	3.0-5.0	.32
	19-61	24-35	1.20-1.40	0.2-0.6	0.19-0.21	3.0-5.9	0.1-2.0	.43
219: Statemeadow	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	8-19	1.00-1.20	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.49
	2-9	16-25	1.00-1.20	0.6-2	0.20-0.22	0.0-2.9	2.0-4.0	.43
	9-51	19-34	1.15-1.25	0.6-2	0.19-0.21	0.0-2.9	1.0-2.0	.43
	51-61	20-40	1.20-1.50	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.49
Reggear	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-23	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	2.0-4.0	.43
	8-13	8-25	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	1.0-3.0	.55
	13-22	16-26	1.20-1.55	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.55
	22-31	17-33	1.50-1.65	0.2-0.6	0.19-0.21	3.0-5.9	0.0-0.5	.55
	31-60	22-45	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55
220: Swayne	60-86	19-38	1.65-1.85	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.55
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-23	1.00-1.30	0.6-2	0.18-0.21	0.0-2.9	2.0-4.0	.32
	8-14	20-30	1.40-1.50	0.6-2	0.18-0.21	3.0-5.9	1.0-2.0	.43
	14-22	23-34	1.45-1.55	0.6-2	0.17-0.20	3.0-5.9	0.5-1.0	.49
	22-56	27-50	1.50-1.60	0.06-0.2	0.16-0.18	6.0-8.9	0.0-0.5	.37
221: Taney	56-61	34-42	1.50-1.60	0.06-0.2	0.16-0.18	6.0-8.9	0.0-0.5	.32
	0-10	16-26	1.25-1.35	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32
	10-31	12-25	1.40-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.55
	31-60	28-36	1.50-1.75	0.0015-0.06	0.04-0.07	3.0-5.9	0.5-2.0	.49
222: Taney	0-14	20-27	1.15-1.45	0.6-2	0.18-0.24	3.0-5.9	2.0-5.0	.37
	14-23	18-27	1.25-1.55	0.6-2	0.18-0.24	3.0-5.9	0.7-2.0	.55
	23-29	10-20	1.40-1.55	0.6-2	0.18-0.24	0.0-2.9	0.2-1.0	.64
	29-36	23-35	1.60-1.80	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.49
	36-63	30-55	1.45-1.65	0.2-0.6	0.06-0.10	3.0-5.9	0.0-0.5	.28
Joel	0-18	20-26	1.20-1.35	0.6-2	0.16-0.20	0.0-2.9	2.0-5.0	.37
	18-24	20-26	1.25-1.40	0.6-2	0.18-0.24	0.0-2.9	0.5-2.0	.49
	24-60	24-35	1.30-1.50	0.2-0.6	0.15-0.19	3.0-5.9	0.5-1.0	.43
223: Taney	0-10	16-26	1.25-1.35	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32
	10-31	12-25	1.40-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.55
	31-60	28-36	1.50-1.75	0.0015-0.06	0.04-0.07	3.0-5.9	0.5-2.0	.49

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
223: McCrosket-----	0-2	0-25	0.10-0.30					
	2-15	8-18	0.95-1.50	6-100	0.30-0.60	---	28-70	---
	15-35	12-25	1.00-1.60	0.6-2	0.07-0.17	0.0-2.9	2.0-4.0	.20
	35-48	5-26	1.00-1.60	0.6-2	0.07-0.09	0.0-2.9	0.0-1.0	.10
	48-58	---	---	---	---	---	0.0-0.5	.10
224: Taney-----	0-10	16-26	1.25-1.35	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32
	10-31	12-25	1.40-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.55
	31-60	28-36	1.50-1.75	0.0015-0.06	0.04-0.07	3.0-5.9	0.5-2.0	.49
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-15	14-25	1.30-1.50	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.28
Setters-----	15-28	15-26	1.30-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.43
	28-34	10-20	1.30-1.60	0.06-2	0.19-0.24	3.0-6.0	0.5-1.0	.55
	34-62	36-45	1.40-1.60	0.06-0.2	0.15-0.19	6.0-8.9	0.5-1.0	.37
	0-10	16-26	1.25-1.35	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.32
	10-31	12-25	1.40-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-3.0	.55
225: Taney-----	31-60	28-36	1.50-1.75	0.0015-0.06	0.04-0.07	3.0-5.9	0.5-2.0	.49
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	2-15	14-25	1.30-1.50	0.6-2	0.19-0.24	0.0-2.9	3.0-5.0	.28
	15-28	15-26	1.30-1.50	0.6-2	0.19-0.24	0.0-2.9	1.0-4.0	.43
	28-34	10-20	1.30-1.60	0.06-2	0.19-0.24	3.0-6.0	0.5-1.0	.55
Setters-----	34-62	36-45	1.40-1.60	0.06-0.2	0.15-0.19	6.0-8.9	0.5-1.0	.37
	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-13	17-26	1.10-1.30	0.6-2	0.19-0.21	0.0-2.9	1.0-3.0	.43
	13-23	22-35	1.30-1.50	0.2-0.6	0.19-0.21	3.0-5.9	0.5-1.0	.37
	23-42	22-42	0.95-1.50	0.06-0.6	0.14-0.21	3.0-5.9	0.0-0.8	.24
226: Teakean-----	42-61	26-39	1.50-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.0-0.5	.20
	0-7	16-25	1.15-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-4.0	.32
	7-24	18-50	1.20-1.45	0.2-0.6	0.19-0.21	3.0-5.9	1.0-2.0	.43
	24-34	22-29	1.20-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.5-1.0	.49
	34-64	15-43	1.20-1.50	0.2-2	0.16-0.21	3.0-5.9	0.5-1.0	.43

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
228:								
Texascreek-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-13	8-18	1.25-1.40	0.6-2	0.15-0.17	0.0-2.9	2.0-4.0	.32
	13-25	5-19	1.25-1.45	0.6-6	0.12-0.16	0.0-2.9	1.0-3.0	.20
	25-33	3-15	1.35-1.55	0.6-6	0.08-0.13	0.0-2.9	0.5-2.0	.20
	33-43	---	---	---	---	---	---	---
Rock outcrop-----	0-60	---	---	---	---	---	---	---
229:								
Texascreek, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-13	8-18	1.25-1.40	0.6-2	0.15-0.17	0.0-2.9	2.0-4.0	.32
	13-25	5-19	1.25-1.45	0.6-6	0.12-0.16	0.0-2.9	1.0-3.0	.20
	25-33	3-15	1.35-1.55	0.6-6	0.08-0.13	0.0-2.9	0.5-2.0	.20
	33-43	---	---	---	---	---	---	---
Whiskeycreek-----	0-4	4-15	1.20-1.50	0.6-6	0.09-0.15	0.0-2.9	2.0-4.0	.24
	4-9	2-10	1.40-1.60	2-20	0.04-0.08	0.0-2.9	0.5-2.0	.32
	9-15	2-5	1.40-1.70	6-20	0.03-0.08	0.0-2.9	0.5-1.0	.15
	15-25	---	---	---	---	---	---	---
230:								
Norwidge-----	0-3	0-25	0.10-0.30	6-100	0.30-0.60	---	50-95	---
	3-6	8-10	0.62-0.91	0.6-4	0.35-0.45	1.0-2.9	2.0-15	.37
	6-17	8-10	0.66-0.87	0.6-4	0.35-0.45	1.0-2.9	1.2-4.1	.43
	17-26	15-23	1.35-1.70	0.1-1	0.20-0.20	1.0-4.5	0.2-1.2	.55
	26-42	20-32	1.34-1.75	0.2-1	0.20-0.20	3.0-5.9	0.4-0.7	.49
	42-81	18-39	1.57-1.72	0.2-0.6	0.18-0.20	3.0-7.9	0.1-0.6	.37
Threebear-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.85	0.6-2	0.21-0.25	0.0-2.9	4.0-6.0	.37
	3-18	8-10	0.65-0.90	0.6-2	0.21-0.24	0.0-2.9	1.0-4.0	.49
	18-26	15-25	1.30-1.50	0.6-2	0.19-0.21	0.0-2.9	0.5-1.0	.43
	26-40	18-28	1.45-1.55	0.6-2	0.18-0.21	3.0-5.9	0.1-1.0	.49
	40-69	21-32	1.55-1.70	0.0015-0.06	0.05-0.07	3.0-5.9	0.1-1.0	.49
231:								
Tomodo-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	8-10	0.65-0.85	0.6-2	0.21-0.25	0.0-2.9	3.0-7.0	.43
	3-20	8-10	0.65-0.90	0.6-2	0.21-0.24	0.0-2.9	1.0-3.0	.55
	20-30	12-24	1.30-1.50	0.6-2	0.16-0.19	0.0-2.9	0.5-1.0	.49
	30-51	15-27	1.40-1.55	0.6-2	0.16-0.18	0.0-2.9	0.1-1.0	.49
	51-62	12-35	1.40-1.60	0.2-2	0.16-0.21	3.0-5.9	0.1-1.0	.49
	62-66	18-35	1.45-1.65	0.0015-0.06	0.05-0.07	3.0-5.9	0.1-1.0	.43

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
232: Tomodo-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-3	8-10	0.65-0.85	0.6-2	0.21-0.25	0.0-2.9	3.0-7.0	.43
	3-20	8-10	0.65-0.90	0.6-2	0.21-0.24	0.0-2.9	1.0-3.0	.55
	20-30	12-24	1.30-1.50	0.6-2	0.16-0.19	0.0-2.9	0.5-1.0	.49
	30-51	15-27	1.40-1.55	0.6-2	0.16-0.18	0.0-2.9	0.1-1.0	.49
	51-62	12-35	1.40-1.60	0.2-2	0.16-0.21	3.0-5.9	0.1-1.0	.49
62-66	18-35	1.45-1.65	0.0015-0.06	0.05-0.07	3.0-5.9	0.1-1.0	.43	
Lado-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-4	8-10	0.65-0.95	2-6	0.21-0.28	0.0-2.9	2.0-8.0	.32
	4-20	8-18	0.65-1.00	2-6	0.21-0.30	0.0-2.9	1.0-4.0	.37
	20-48	17-34	1.30-1.60	0.2-2	0.16-0.21	3.0-5.9	1.0-2.0	.32
	48-64	15-31	1.25-1.60	0.6-2	0.16-0.21	0.0-2.9	0.0-0.5	.37
233: Township-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.90	0.6-2	0.19-0.31	0.0-2.9	3.0-6.0	.43
	3-17	8-10	0.65-1.00	0.6-2	0.18-0.28	0.0-2.9	1.0-3.0	.55
	17-35	10-25	1.45-1.65	0.6-2	0.08-0.09	0.0-2.9	0.5-1.0	.15
	35-43	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	43-53	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	53-66	12-20	1.10-1.25	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.05
Rettig-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
234: Township-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.90	0.6-2	0.19-0.31	0.0-2.9	3.0-6.0	.43
	3-17	8-10	0.65-1.00	0.6-2	0.18-0.28	0.0-2.9	1.0-3.0	.55
	17-35	10-25	1.45-1.65	0.6-2	0.08-0.09	0.0-2.9	0.5-1.0	.15
	35-43	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	43-53	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	53-66	12-20	1.10-1.25	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.05

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
234: Rettig-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
235: Township, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	8-10	0.65-0.90	0.6-2	0.19-0.31	0.0-2.9	3.0-6.0	.43
	3-17	8-10	0.65-1.00	0.6-2	0.18-0.28	0.0-2.9	1.0-3.0	.55
	17-35	10-25	1.45-1.65	0.6-2	0.08-0.09	0.0-2.9	0.5-1.0	.15
	35-43	15-18	1.25-1.35	0.6-2	0.12-0.14	0.0-2.9	0.5-1.0	.15
	43-53	11-26	1.45-1.55	0.6-2	0.05-0.08	0.0-2.9	0.0-0.5	.05
	53-66	12-20	1.10-1.25	2-6	0.05-0.08	0.0-2.9	0.0-0.5	.05
Rettig, low precipitation-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	60-95	---
	1-7	8-12	0.65-0.90	0.6-2	0.20-0.30	0.0-2.9	3.0-6.0	.32
	7-27	7-14	0.65-1.00	0.6-2	0.20-0.30	0.0-2.9	1.0-3.0	.55
	27-34	8-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.5-1.0	.20
	34-47	10-20	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.20
	47-63	5-16	1.15-1.65	2-6	0.11-0.18	0.0-2.9	0.0-0.5	.15
	63-66	2-18	1.20-1.70	2-20	0.06-0.13	0.0-2.9	0.0-0.5	.10
Nakarna, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-5	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	3.0-8.0	.37
	5-15	3-9	0.65-0.85	0.6-2	0.19-0.23	0.0-2.9	1.0-3.0	.55
	15-34	4-18	1.30-1.50	0.6-6	0.11-0.18	0.0-2.9	0.5-1.0	.37
	34-42	2-15	1.40-1.55	2-6	0.07-0.13	0.0-2.9	0.0-0.5	.24
	42-52	---	---	---	---	---	---	---
236: Trappercreek-----	0-4	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	4-8	8-10	0.65-0.90	2-6	0.20-0.24	0.0-2.9	3.0-7.0	.37
	8-19	8-10	0.65-1.00	2-6	0.20-0.24	0.0-2.9	2.0-4.0	.37
	19-32	18-28	1.25-1.35	0.2-2	0.19-0.21	3.0-5.9	1.0-2.0	.43
	32-46	15-34	1.30-1.40	0.2-2	0.17-0.19	3.0-5.9	0.5-1.0	.43
	46-60	20-36	1.35-1.45	0.2-0.6	0.19-0.21	3.0-5.9	0.0-0.5	.43
	60-79	16-35	1.25-1.35	0.6-2	0.17-0.19	3.0-5.9	0.0-0.5	.43
	79-85	10-20	1.15-1.70	0.6-20	0.04-0.18	0.0-2.9	0.0-0.5	.49

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
236: Narnett-----	0-9	8-12	0.65-0.85	0.6-2	0.20-0.21	0.0-2.9	2.0-5.0	.49
	9-15	17-24	1.40-1.60	0.6-2	0.19-0.20	0.0-2.9	0.5-1.0	.55
	15-50	16-32	1.40-1.60	0.2-0.6	0.19-0.21	3.0-5.9	0.0-0.5	.55
	50-58	18-29	1.40-1.60	0.6-2	0.17-0.19	0.0-2.9	0.0-0.5	.49
	58-80	9-25	1.40-1.60	0.6-6	0.07-0.12	0.0-2.9	0.0-0.5	.20
237: Uvi-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-8	8-15	0.65-0.98	0.6-2	0.16-0.18	0.0-2.9	3.0-9.5	.28
	8-44	12-25	1.40-1.60	0.6-2	0.10-0.18	0.0-2.9	0.5-1.0	.37
	44-61	5-20	1.45-1.60	2-6	0.08-0.13	0.0-2.9	0.1-0.5	.24
238: Uvi-----	0-4	18-24	1.20-1.30	0.6-2	0.19-0.21	0.0-2.9	2.0-5.0	.37
	4-55	12-20	1.45-1.55	0.6-2	0.12-0.16	0.0-2.9	0.5-1.0	.43
	55-65	5-12	1.45-1.60	0.6-6	0.08-0.12	0.0-2.9	0.0-0.5	.17
239: Vaywood, high precipitation-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-10	0.65-0.90	0.6-2	0.19-0.22	0.0-2.9	3.0-6.0	.37
	7-15	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.43
	15-20	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.49
	20-25	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.15
	25-38	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.05
	38-47	5-13	1.35-1.50	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.28
	47-62	3-14	1.50-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.20
Vaywood, dry-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-10	0.65-0.90	0.6-2	0.19-0.22	0.0-2.9	3.0-6.0	.37
	7-15	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.43
	15-20	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.49
	20-25	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.15
	25-38	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.05
	38-47	5-13	1.35-1.50	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.28
	47-62	3-14	1.50-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.20

Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Erosion	
							Organic matter	Kw
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
240: Vaywood-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-10	0.65-0.90	0.6-2	0.19-0.22	0.0-2.9	3.0-6.0	.37
	7-15	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.43
	15-20	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.49
	20-25	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.15
	25-38	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.05
	38-47	5-13	1.35-1.50	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.28
	47-62	3-14	1.50-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.20
241: Vaywood-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-2	0-25	0.10-0.30	6-100	0.30-0.60	---	19-49	---
	2-7	8-10	0.65-0.90	0.6-2	0.19-0.22	0.0-2.9	3.0-6.0	.37
	7-15	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.43
	15-20	8-10	0.65-0.90	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.49
	20-25	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.15
	25-38	7-18	1.35-1.55	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.05
	38-47	5-13	1.35-1.50	2-6	0.08-0.10	0.0-2.9	0.0-0.5	.28
	47-62	3-14	1.50-1.60	6-20	0.04-0.06	0.0-2.9	0.0-0.5	.20
Handoff-----	0-2	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	2-11	8-10	0.75-0.90	0.6-2	0.20-0.23	0.0-2.9	10-15	.37
	11-22	8-10	0.85-0.95	0.6-2	0.20-0.22	0.0-2.9	6.0-10	.37
	22-30	12-16	1.00-1.20	0.6-2	0.15-0.17	0.0-2.9	1.0-4.0	.24
	30-45	16-20	1.40-1.50	0.6-2	0.08-0.10	0.0-2.9	0.5-1.0	.15
	45-54	10-14	1.45-1.55	2-6	0.07-0.08	0.0-2.9	0.0-0.5	.05
	54-64	5-14	1.50-1.60	6-20	0.03-0.05	0.0-2.9	0.0-0.5	.02
242: Water-----	---	---	---	---	---	---	---	---
243: Wellsbench-----	0-6	18-26	1.15-1.40	0.6-2	0.18-0.20	0.0-2.9	2.0-4.0	.32
	6-14	28-38	1.35-1.45	0.2-0.6	0.12-0.16	3.0-5.9	1.0-3.0	.17
	14-41	35-44	1.40-1.60	0.06-0.2	0.08-0.12	3.0-5.9	0.5-2.0	.10
	41-51	---	---	---	---	---	---	---
244: Wellsbench-----	0-6	18-26	1.15-1.40	0.6-2	0.18-0.20	0.0-2.9	2.0-4.0	.32
	6-14	28-38	1.35-1.45	0.2-0.6	0.12-0.16	3.0-5.9	1.0-3.0	.17
	14-41	35-44	1.40-1.60	0.06-0.2	0.08-0.12	3.0-5.9	0.5-2.0	.10
	41-51	---	---	---	---	---	---	---



Table 27.--Physical Properties--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion Kw
	In	Pct	g/cc	In/hr	In/in	Pct	Pct	
244: Lacy-----	0-1	0-25	0.10-0.30	6-100	0.30-0.60	---	28-70	---
	1-3	16-23	1.30-1.50	0.6-2	0.13-0.15	0.0-2.9	2.0-3.0	.37
	3-13	22-36	1.50-1.65	0.2-0.6	0.08-0.12	0.0-2.9	1.0-2.0	.05
	13-16	28-35	1.20-1.40	0.2-0.6	0.06-0.08	3.0-5.9	1.0-2.0	.05
	16-26	---	---	---	---	---	---	---
245: Wilkins-----	0-15	18-27	1.10-1.25	0.6-2	0.18-0.22	3.0-5.9	3.0-6.0	.28
	15-20	10-20	1.30-1.50	0.6-2	0.18-0.22	0.0-2.9	0.5-1.0	.55
	20-52	40-50	1.20-1.30	0.0000-0.06	0.12-0.18	9.0-25.0	0.0-0.5	.37
	52-64	27-40	1.25-1.40	0.2-0.6	0.16-0.21	3.0-5.9	0.0-0.5	.32

Table 28.--Chemical Properties

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation-		Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g					
	In				pH	Pct	Pct	mm
1: Agatha, very rocky-----	0-1	---	20-30	20-30	4.5-5.5	0	0	
	1-2	---	20-30	20-30	4.5-5.5	0	0	
	2-5	9-25	---	---	5.2-7.3	0	0	
	5-9	14-19	---	---	5.1-7.3	0	0	
	9-20	11-22	---	---	5.1-6.8	0	0	
	20-60	10-24	---	---	5.1-6.8	0	0	
	60-70	---	---	---	---	---	---	
Rock outcrop-----	0-60	---	---	---	---	---	---	
2: Agatha-----	0-1	---	20-30	20-30	4.5-5.5	0	0	
	1-2	---	20-30	20-30	4.5-5.5	0	0	
	2-5	9-25	---	---	5.2-7.3	0	0	
	5-9	14-19	---	---	5.1-7.3	0	0	
	9-20	11-22	---	---	5.1-6.8	0	0	
	20-60	10-24	---	---	5.1-6.8	0	0	
	60-70	---	---	---	---	---	---	
3: Agatha-----	0-1	---	20-30	20-30	4.5-5.5	0	0	
	1-2	---	20-30	20-30	4.5-5.5	0	0	
	2-5	9-25	---	---	5.2-7.3	0	0	
	5-9	14-19	---	---	5.1-7.3	0	0	
	9-20	11-22	---	---	5.1-6.8	0	0	
	20-60	10-24	---	---	5.1-6.8	0	0	
	60-70	---	---	---	---	---	---	
4: Ahsahka-----	0-6	10-20	18-27	18-27	5.7-7.2	0	0	
	6-16	10-25	18-27	18-27	5.9-6.8	0	0	
	16-35	15-25	18-22	18-22	6.3-7.4	0	0	
	35-60	25-35	21-40	21-40	5.6-7.2	0	0	
	0-6	10-25	18-27	18-27	6.1-7.3	0	0	
	6-16	15-25	18-22	18-22	5.8-7.3	0	0	
	16-27	25-35	21-40	21-40	5.8-7.3	0	0	
Fordcreek-----	27-41	25-35	20-40	20-40	5.8-7.3	0	0	
	41-51	---	---	---	---	---	---	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
5: Ahsahka-----	0-6 6-16 16-35 35-60	10-20 10-25 15-25 25-35	18-27 18-27 18-22 21-40	5.7-7.2 5.9-6.8 6.3-7.4 5.6-7.2	0 0 0 0	0 0 0 0	
Whiskeycreek-----	0-4 4-9 9-15 15-25	9-14 3-8 1-4 ---	--- --- --- ---	5.6-7.3 5.6-7.3 6.0-7.3 ---	0 0 0 ---	0 0 0 ---	
6: Aldermand-----	0-1 1-2 2-7 7-17 17-25 25-33 33-44 44-62	--- --- 15-25 15-25 7-10 7-10 4-7 1-5	20-30 20-30 11-16 --- 4-9 --- 8-9 ---	4.5-5.5 4.5-5.5 5.0-7.2 5.4-7.1 4.9-6.8 4.7-6.4 4.6-6.4 4.6-6.5	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	
7: Aldermand-----	0-1 1-2 2-7 7-17 17-25 25-33 33-44 44-62	--- --- 15-25 15-25 7-10 7-10 4-7 1-5	20-30 20-30 11-16 --- 4-9 --- 8-9 ---	4.5-5.5 4.5-5.5 5.0-7.2 5.4-7.1 4.9-6.8 4.7-6.4 4.6-6.4 4.6-6.5	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	
8: Aldermand, dry-----	0-1 1-2 2-7 7-17 17-25 25-33 33-44 44-62	--- --- 15-25 15-25 7-10 7-10 4-7 1-5	20-30 20-30 11-16 --- 4-9 --- 8-9 ---	4.5-5.5 4.5-5.5 5.0-7.2 5.4-7.1 4.9-6.8 4.7-6.4 4.6-6.4 4.6-6.5	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
9: Aquandic Cryaquepts-----	0-8 8-18 18-27 27-54 54-60	11-15 10-15 5-11 5-12 3-8	--- --- 11-16 4-9 8-9	4.8-5.6 4.7-5.4 4.8-5.4 4.8-5.6 5.0-5.6	0 0 0 0 0	0 0 0 0 0	
10: Aquandic Endoaquepts-----	0-10 10-52 52-60	6-9 4-12 1-10	4-7 2-9 0-7	4.5-6.0 4.0-6.0 4.5-6.6	0 0 0	0 0 0	
Aquandic Dystrudepts-----	0-2 2-10 10-31 31-70	--- 5-11 3-15 1-9	20-30 --- --- ---	4.5-5.5 4.6-6.4 4.8-6.5 5.0-6.0	0 0 0 0	0 0 0 0	
11: Bandmill, dry-----	0-2 2-3 3-10 10-21 21-27 27-62	--- 15-25 15-25 10-20 8-15 20-30	20-30 --- --- --- --- ---	6.1-7.3 5.4-7.0 5.4-6.3 4.2-6.4 5.2-5.4 4.6-6.4	0 0 0 0 0 0	0 0 0 0 0 0	
Grangemont-----	0-2 2-3 3-7 7-14 14-38 38-95	--- --- 15-25 15-25 12-20 15-20	20-30 20-30 --- --- 9-15 11-15	4.5-5.5 4.5-5.5 5.6-6.8 5.1-6.5 4.6-6.3 4.8-6.6	0 0 0 0 0 0	0 0 0 0 0 0	
Bargamin-----	0-1 1-2 2-17 17-38 38-65	--- 15-25 15-25 15-20 ---	20-30 --- --- --- 25-30	6.1-7.3 5.2-7.0 5.7-7.0 5.4-6.3 4.6-5.6	0 0 0 0 0	0 0 0 0 0	
12: Bandmill-----	0-2 2-3 3-10 10-21 21-27 27-62	--- 15-25 15-25 10-20 8-15 20-30	20-30 --- --- --- --- ---	6.1-7.3 5.4-7.0 5.4-6.3 4.2-6.4 5.2-5.4 4.6-6.4	0 0 0 0 0 0	0 0 0 0 0 0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil	Calcium	Gypsum	Sa
		exchange	capacity	cation-	exchange				
		capacity		exchange	capacity	reaction	carbonate		
	In	meq/100 g	meq/100 g	pH	Pct	Pct			mm
12:									
Riswold-----	0-1	---	20-30	6.1-7.3	0	0	0	0	
	1-9	14-25	---	5.9-7.3	0	0	0	0	
	9-17	13-20	---	5.6-7.3	0	0	0	0	
	17-27	15-25	---	5.2-6.5	0	0	0	0	
	27-44	15-25	---	5.0-6.5	0	0	0	0	
	44-60	18-24	---	5.6-7.3	0	0	0	0	
	60-72	20-28	---	5.9-7.3	0	0	0	0	
13:									
Berthahill, moist-----	0-1	---	20-30	6.1-7.3	0	0	0	0	
	1-4	---	20-30	6.1-7.3	0	0	0	0	
	4-11	15-30	38-39	4.8-6.2	0	0	0	0	
	11-20	10-25	17-29	5.6-6.2	0	0	0	0	
	20-28	7-12	13-14	5.1-6.0	0	0	0	0	
	28-40	6-7	9-12	4.5-5.5	0	0	0	0	
	40-55	3-5	6-13	4.5-5.0	0	0	0	0	
	55-66	3-4	6-11	4.5-5.0	0	0	0	0	
Handoff-----	0-2	---	20-30	6.1-7.3	0	0	0	0	
	2-11	15-25	---	5.1-6.0	0	0	0	0	
	11-22	15-25	---	5.1-6.0	0	0	0	0	
	22-30	---	11-13	4.5-6.0	0	0	0	0	
	30-45	---	10-12	4.5-6.0	0	0	0	0	
	45-54	---	6-8	4.5-5.5	0	0	0	0	
	54-64	---	4-6	4.5-5.5	0	0	0	0	
14:									
Berthahill-----	0-1	---	20-30	6.1-7.3	0	0	0	0	
	1-4	---	20-30	6.1-7.3	0	0	0	0	
	4-11	15-30	38-39	4.8-6.2	0	0	0	0	
	11-20	10-25	17-29	5.6-6.2	0	0	0	0	
	20-28	7-12	13-14	5.1-6.0	0	0	0	0	
	28-40	6-7	9-12	4.5-5.5	0	0	0	0	
	40-55	3-5	6-13	4.5-5.0	0	0	0	0	
	55-66	3-4	6-11	4.5-5.0	0	0	0	0	
Handoff-----	0-2	---	20-30	6.1-7.3	0	0	0	0	
	2-11	15-25	---	5.1-6.0	0	0	0	0	
	11-22	15-25	---	5.1-6.0	0	0	0	0	
	22-30	---	11-13	4.5-6.0	0	0	0	0	
	30-45	---	10-12	4.5-6.0	0	0	0	0	
	45-54	---	6-8	4.5-5.5	0	0	0	0	
	54-64	---	4-6	4.5-5.5	0	0	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
15: Berthahill-----	0-1	---	20-30	6.1-7.3	0	0	
	1-4	---	20-30	6.1-7.3	0	0	
	4-11	15-30	38-39	4.8-6.2	0	0	
	11-20	10-25	17-29	5.6-6.2	0	0	
	20-28	7-12	13-14	5.1-6.0	0	0	
	28-40	6-7	9-12	4.5-5.5	0	0	
	40-55	3-5	6-13	4.5-5.0	0	0	
	55-66	3-4	6-11	4.5-5.0	0	0	
Shattuck-----	0-2	---	20-30	4.5-5.5	0	0	
	2-7	14-32	---	5.5-6.5	0	0	
	7-19	9-20	---	5.5-6.4	0	0	
	19-30	6-17	---	4.5-5.9	0	0	
	30-63	11-20	---	4.5-5.9	0	0	
16: Bigtalk, cool-----	0-1	---	20-30	6.1-7.3	0	0	
	1-3	13-15	---	6.1-6.5	0	0	
	3-8	11-13	---	6.1-6.5	0	0	
	8-35	12-15	---	5.6-6.5	0	0	
	35-48	9-12	---	5.6-6.0	0	0	
	48-61	6-9	---	5.1-6.0	0	0	
Bigtalk, wet-----	0-1	---	20-30	6.1-7.3	0	0	
	1-3	13-15	---	6.1-6.5	0	0	
	3-8	11-13	---	6.1-6.5	0	0	
	8-35	12-15	---	5.6-6.5	0	0	
	35-48	9-12	---	5.6-6.0	0	0	
	48-61	6-9	---	5.1-6.0	0	0	
17: Bigtalk-----	0-1	---	20-30	6.1-7.3	0	0	
	1-3	13-15	---	6.1-6.5	0	0	
	3-8	11-13	---	6.1-6.5	0	0	
	8-35	12-15	---	5.6-6.5	0	0	
	35-48	9-12	---	5.6-6.0	0	0	
	48-61	6-9	---	5.1-6.0	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity	
		meq/100 g	meq/100 g	pH	Pct	Pct				
18:	In									
Bigtalk, cool-----	0-1	---	20-30	6.1-7.3	0	0				
	1-3	13-15	---	6.1-6.5	0	0				
	3-8	11-13	---	6.1-6.5	0	0				
	8-35	12-15	---	5.6-6.5	0	0				
	35-48	9-12	---	5.6-6.0	0	0				
	48-61	6-9	---	5.1-6.0	0	0				
Floodwood, cool-----	0-1	---	20-30	4.5-5.5	0	0				
	1-3	15-30	---	5.3-7.0	0	0				
	3-13	10-24	---	5.1-6.8	0	0				
	13-35	10-20	---	4.6-6.5	0	0				
	35-55	8-14	6-11	4.4-6.0	0	0				
	55-63	1-7	0-5	4.3-5.6	0	0				
19:										
Bigtalk, cool-----	0-1	---	20-30	6.1-7.3	0	0				
	1-3	13-15	---	6.1-6.5	0	0				
	3-8	11-13	---	6.1-6.5	0	0				
	8-35	12-15	---	5.6-6.5	0	0				
	35-48	9-12	---	5.6-6.0	0	0				
	48-61	6-9	---	5.1-6.0	0	0				
Keeler, cool-----	0-1	---	20-30	6.1-7.3	0	0				
	1-5	8-20	---	5.6-7.1	0	0				
	5-12	7-15	---	5.4-6.7	0	0				
	12-39	8-18	---	4.9-6.3	0	0				
	39-48	7-20	---	4.9-6.2	0	0				
	48-74	7-20	---	4.0-6.2	0	0				
20:										
Boulder creek, moist-----	0-1	---	20-30	4.5-5.5	0	0				
	1-8	15-30	47-49	5.6-7.3	0	0				
	8-21	15-25	27-31	5.6-7.3	0	0				
	21-27	9-12	15-16	5.1-6.5	0	0				
	27-34	5-11	1-16	5.1-6.5	0	0				
	34-53	5-11	1-3	4.5-6.5	0	0				
	53-69	3-3	1-3	4.2-6.5	0	0				
21:										
Boulder creek-----	0-2	15-30	---	6.1-7.3	0	0				
	2-15	4-12	---	6.1-7.3	0	0				
	15-26	2-10	---	5.6-7.3	0	0				
	26-60	1-4	---	5.6-7.3	0	0				

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
22: Boulder creek-----	0-2 2-15 15-26 26-60	15-30 4-12 2-10 1-4	--- --- --- ---	6.1-7.3 6.1-7.3 5.6-7.3 5.6-7.3	0 0 0 0	0 0 0 0	
23: Boulder creek, moist-----	0-1 1-8 8-21 21-27 27-34 34-53 53-69	--- 15-30 15-25 9-12 5-11 5-11 3-3	20-30 47-49 27-31 15-16 1-16 1-3 1-3	4.5-5.5 5.6-7.3 5.6-7.3 5.1-6.5 5.1-6.5 4.5-6.5 4.2-6.5	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
Brodeer-----	0-1 1-2 2-4 4-21 21-59 59-67	--- --- 15-25 15-25 10-15 5-10	20-30 20-30 27-32 27-32 12-15 6-11	6.1-7.3 6.1-7.3 5.2-7.0 5.5-7.0 4.7-6.8 4.6-6.0	0 0 0 0 0 0	0 0 0 0 0 0	
24: Boulder creek-----	0-1 1-8 8-21 21-27 27-34 34-53 53-69	--- 15-30 15-25 9-12 5-11 5-11 3-3	20-30 47-49 27-31 15-16 1-16 1-3 1-3	4.5-5.5 5.6-7.3 5.6-7.3 5.1-6.5 5.1-6.5 4.5-6.5 4.2-6.5	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
Brodeer-----	0-1 1-2 2-4 4-21 21-59 59-67	--- --- 15-25 15-25 10-15 5-10	20-30 20-30 27-32 27-32 12-15 6-11	6.1-7.3 6.1-7.3 5.2-7.0 5.5-7.0 4.7-6.8 4.6-6.0	0 0 0 0 0 0	0 0 0 0 0 0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct					
25:	In										
Bouldercreek-----	0-1	---	20-30	4.5-5.5	0	0					
	1-8	15-30	47-49	5.6-7.3	0	0					
	8-21	15-25	27-31	5.6-7.3	0	0					
	21-27	9-12	15-16	5.1-6.5	0	0					
	27-34	5-11	1-16	5.1-6.5	0	0					
	34-53	5-11	1-3	4.5-6.5	0	0					
	53-69	3-3	1-3	4.2-6.5	0	0					
Judgetown-----	0-1	---	20-30	6.1-7.3	0	0					
	1-2	---	20-30	6.1-7.3	0	0					
	2-4	11-21	---	5.6-7.0	0	0					
	4-17	7-14	---	5.0-6.8	0	0					
	17-30	4-14	---	5.0-6.3	0	0					
	30-52	---	1-5	4.3-6.3	0	0					
	52-62	---	---	---	---	---					
26:											
Bouldercreek, high											
precipitation-----	0-2	15-30	---	6.1-7.3	0	0					
	2-15	4-12	---	6.1-7.3	0	0					
	15-26	2-10	---	5.6-7.3	0	0					
	26-60	1-4	---	5.6-7.3	0	0					
Marblecreek-----	0-1	---	20-30	4.5-5.5	0	0					
	1-2	---	20-30	4.5-5.5	0	0					
	2-5	15-30	---	6.6-7.3	0	0					
	5-13	10-24	---	6.6-7.3	0	0					
	13-27	3-8	---	5.6-6.5	0	0					
	27-46	2-5	---	5.6-6.5	0	0					
	46-62	1-3	---	5.6-6.5	0	0					
27:											
Bouldercreek, cool, dry---	0-1	---	20-30	4.5-5.5	0	0					
	1-8	15-30	47-49	5.6-7.3	0	0					
	8-21	15-25	27-31	5.6-7.3	0	0					
	21-27	9-12	15-16	5.1-6.5	0	0					
	27-34	5-11	1-16	5.1-6.5	0	0					
	34-53	5-11	1-3	4.5-6.5	0	0					
	53-69	3-3	1-3	4.2-6.5	0	0					

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sal-
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
27: Rettig, cool-----	0-1 1-7 7-27 27-34 34-47 47-63 63-66	--- 15-25 15-25 6-10 6-10 6-8 2-8	20-30 --- --- --- --- --- ---	4.5-5.5 5.6-7.2 5.6-7.0 5.6-6.8 5.4-6.4 5.4-6.2 4.9-6.2	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
28: Brequito, dry-----	0-1 1-3 3-5 5-11 11-20 20-37 37-67	--- --- 15-25 15-20 15-20 14-20 9-13	20-30 20-30 26-30 24-28 14-17 23-29 18-22	4.5-5.5 4.5-5.5 5.4-6.8 5.4-6.8 5.4-6.5 4.5-6.4 4.5-6.0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
29: Brequito-----	0-1 1-3 3-5 5-11 11-20 20-37 37-67	--- --- 15-25 15-20 15-20 14-20 9-13	20-30 20-30 26-30 24-28 14-17 23-29 18-22	4.5-5.5 4.5-5.5 5.4-6.8 5.4-6.8 5.4-6.5 4.5-6.4 4.5-6.0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
Grangemont-----	0-2 2-3 3-7 7-14 14-38 38-95	--- --- 15-25 15-25 12-20 15-20	20-30 20-30 --- --- 9-15 11-15	4.5-5.5 4.5-5.5 5.6-6.8 5.1-6.5 4.6-6.3 4.8-6.6	0 0 0 0 0 0	0 0 0 0 0 0	
30: Brequito-----	0-1 1-3 3-5 5-11 11-20 20-37 37-67	--- --- 15-25 15-20 15-20 14-20 9-13	20-30 20-30 26-30 24-28 14-17 23-29 18-22	4.5-5.5 4.5-5.5 5.4-6.8 5.4-6.8 5.4-6.5 4.5-6.4 4.5-6.0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g				
	In					pH	Pct	Pct	mm
30: Lado, dry-----	0-1	---	20-30	20-30	4.5-5.5		0	0	
	1-2	---	20-30	20-30	4.5-5.5		0	0	
	2-4	15-25	---	---	5.5-7.1		0	0	
	4-20	15-25	---	---	5.1-7.0		0	0	
	20-48	15-20	---	---	4.8-6.7		0	0	
	48-64	10-15	---	---	4.8-6.4		0	0	
31: Brequito-----	0-1	---	20-30	20-30	4.5-5.5		0	0	
	1-3	---	20-30	20-30	4.5-5.5		0	0	
	3-5	15-25	26-30	26-30	5.4-6.8		0	0	
	5-11	15-20	24-28	24-28	5.4-6.8		0	0	
	11-20	15-20	14-17	14-17	5.4-6.5		0	0	
	20-37	14-20	23-29	23-29	4.5-6.4		0	0	
Lado, dry-----	37-67	9-13	18-22	18-22	4.5-6.0		0	0	
	0-1	---	20-30	20-30	6.1-7.3		0	0	
	1-2	---	20-30	20-30	6.1-7.3		0	0	
	2-4	15-25	---	---	5.5-7.1		0	0	
	4-20	15-25	---	---	5.1-7.0		0	0	
	20-48	15-20	---	---	4.8-6.7		0	0	
32: Brequito-----	48-64	10-15	---	---	4.8-6.4		0	0	
	0-1	---	20-30	20-30	4.5-5.5		0	0	
	1-3	---	20-30	20-30	4.5-5.5		0	0	
	3-5	15-25	26-30	26-30	5.4-6.8		0	0	
	5-11	15-20	24-28	24-28	5.4-6.8		0	0	
	11-20	15-20	14-17	14-17	5.4-6.5		0	0	
Mushel-----	20-37	14-20	23-29	23-29	4.5-6.4		0	0	
	37-67	9-13	18-22	18-22	4.5-6.0		0	0	
	0-3	---	20-30	20-30	4.5-5.5		0	0	
	3-6	15-30	---	---	5.1-7.3		0	0	
	6-13	15-30	---	---	5.6-7.3		0	0	
	13-21	10-20	---	---	5.5-6.5		0	0	
	21-39	10-20	---	---	5.1-6.5		0	0	
	39-48	7-15	---	---	5.1-6.0		0	0	
	48-68	7-15	5-11	5-11	5.1-6.0		0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
33: Brequito-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	---	20-30	4.5-5.5	0	0	
	3-5	15-25	26-30	5.4-6.8	0	0	
	5-11	15-20	24-28	5.4-6.8	0	0	
	11-20	15-20	14-17	5.4-6.5	0	0	
	20-37	14-20	23-29	4.5-6.4	0	0	
	37-67	9-13	18-22	4.5-6.0	0	0	
Mushel-----	0-3	---	20-30	4.5-5.5	0	0	
	3-6	15-30	---	5.1-7.3	0	0	
	6-13	15-30	---	5.6-7.3	0	0	
	13-21	10-20	---	5.5-6.5	0	0	
	21-39	10-20	---	5.1-6.5	0	0	
	39-48	7-15	---	5.1-6.0	0	0	
	48-68	7-15	5-11	5.1-6.0	0	0	
34: Brodeer, dry-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	
Brodeer-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	
35: Brodeer-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Silt
35: Mushel-----	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
	0-3	---	20-30	4.5-5.5	0	0	
	3-6	15-30	---	5.1-7.3	0	0	
	6-13	15-30	---	5.6-7.3	0	0	
	13-21	10-20	---	5.5-6.5	0	0	
	21-39	10-20	---	5.1-6.5	0	0	
	39-48	7-15	---	5.1-6.0	0	0	
	48-68	7-15	5-11	5.1-6.0	0	0	
36: Brodeer, warm-----							
	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	
Mushel, dry-----							
	0-3	---	20-30	4.5-5.5	0	0	
	3-6	15-30	---	5.1-7.3	0	0	
	6-13	15-30	---	5.6-7.3	0	0	
	13-21	10-20	---	5.5-6.5	0	0	
	21-39	10-20	---	5.1-6.5	0	0	
	39-48	7-15	---	5.1-6.0	0	0	
	48-68	7-15	5-11	5.1-6.0	0	0	
37: Brodeer-----							
	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	
Bouldercreek-----							
	0-1	---	20-30	4.5-5.5	0	0	
	1-8	15-30	47-49	5.6-7.3	0	0	
	8-21	15-25	27-31	5.6-7.3	0	0	
	21-27	9-12	15-16	5.1-6.5	0	0	
	27-34	5-11	1-16	5.1-6.5	0	0	
	34-53	5-11	1-3	4.5-6.5	0	0	
	53-69	3-3	1-3	4.2-6.5	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
38: Brodeer-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	
Flewsie, dry-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	8-35	---	5.8-6.8	0	0	
	7-13	6-14	---	5.4-6.8	0	0	
	13-16	6-12	---	5.4-6.8	0	0	
	16-23	4-12	---	4.8-6.5	0	0	
	23-31	3-12	---	4.8-6.5	0	0	
	31-46	3-8	---	4.8-6.5	0	0	
	46-62	3-8	---	4.6-6.3	0	0	
39: Brodeer-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	
Lostpete-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-5	25-35	---	5.1-6.0	0	0	
	5-13	20-30	---	5.1-6.2	0	0	
	13-19	20-30	---	5.1-6.2	0	0	
	19-29	8-14	6-11	4.8-6.2	0	0	
	29-42	9-14	7-9	4.6-6.0	0	0	
	42-52	8-14	6-11	4.6-6.0	0	0	
	52-66	8-15	6-11	4.6-5.8	0	0	
40: Brodeer, moist-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct	mm				
40:	In										
Lostpete, moist-----	0-1	---	20-30	4.5-5.5	0	0					
	1-2	---	20-30	4.5-5.5	0	0					
	2-5	25-35	---	5.1-6.0	0	0					
	5-13	20-30	---	5.1-6.2	0	0					
	13-19	20-30	---	5.1-6.2	0	0					
	19-29	8-14	6-11	4.8-6.2	0	0					
	29-42	9-14	7-9	4.6-6.0	0	0					
	42-52	8-14	6-11	4.6-6.0	0	0					
	52-66	8-15	6-11	4.6-5.8	0	0					
41:											
Brodeer, dry-----	0-1	---	20-30	6.1-7.3	0	0					
	1-2	---	20-30	6.1-7.3	0	0					
	2-4	15-25	27-32	5.2-7.0	0	0					
	4-21	15-25	27-32	5.5-7.0	0	0					
	21-59	10-15	12-15	4.7-6.8	0	0					
	59-67	5-10	6-11	4.6-6.0	0	0					
Mushel-----	0-3	---	20-30	4.5-5.5	0	0					
	3-6	15-30	---	5.1-7.3	0	0					
	6-13	15-30	---	5.6-7.3	0	0					
	13-21	10-20	---	5.5-6.5	0	0					
	21-39	10-20	---	5.1-6.5	0	0					
	39-48	7-15	---	5.1-6.0	0	0					
	48-68	7-15	5-11	5.1-6.0	0	0					
42:											
Brodeer-----	0-1	---	20-30	4.5-5.5	0	0					
	1-2	---	20-30	4.5-5.5	0	0					
	2-4	15-25	27-32	5.2-7.0	0	0					
	4-21	15-25	27-32	5.5-7.0	0	0					
	21-59	10-15	12-15	4.7-6.8	0	0					
	59-67	5-10	6-11	4.6-6.0	0	0					
Mushel-----	0-3	---	20-30	4.5-5.5	0	0					
	3-6	15-30	---	5.1-7.3	0	0					
	6-13	15-30	---	5.6-7.3	0	0					
	13-21	10-20	---	5.5-6.5	0	0					
	21-39	10-20	---	5.1-6.5	0	0					
	39-48	7-15	---	5.1-6.0	0	0					
	48-68	7-15	5-11	5.1-6.0	0	0					

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
43: Burntoreek-----	0-7	14-25	---	5.4-6.4	0	0	
	7-11	15-25	---	5.3-6.0	0	0	
	11-28	15-25	---	5.1-6.0	0	0	
	28-36	12-20	---	5.1-6.0	0	0	
	36-60	6-15	---	5.3-6.3	0	0	
44: Campra-----	0-3	---	20-30	6.1-7.3	0	0	
	3-7	15-25	---	6.2-7.3	0	0	
	7-14	15-25	---	6.3-7.2	0	0	
	14-20	15-25	---	6.0-6.8	0	0	
	20-67	25-30	---	5.5-6.8	0	0	
45: Campra-----	0-3	---	20-30	6.1-7.3	0	0	
	3-7	15-25	---	6.2-7.3	0	0	
	7-14	15-25	---	6.3-7.2	0	0	
	14-20	15-25	---	6.0-6.8	0	0	
	20-67	25-30	---	5.5-6.8	0	0	
Sly-----	0-4	---	20-30	6.1-7.3	0	0	
	4-8	4-12	---	5.6-6.8	0	0	
	8-19	4-15	---	4.4-6.8	0	0	
	19-28	11-17	---	4.2-6.8	0	0	
	28-37	17-20	---	4.2-6.1	0	0	
	37-66	10-18	---	6.0-6.2	0	0	
46: Carlinton-----	0-2	---	20-30	4.5-5.5	0	0	
	2-11	13-20	---	5.3-7.0	0	0	
	11-22	15-20	---	5.3-6.4	0	0	
	22-35	15-20	11-15	5.3-6.4	0	0	
	35-62	15-25	11-19	4.5-5.7	0	0	
47: Carlinton-----	0-2	---	20-30	4.5-5.5	0	0	
	2-11	13-20	---	5.3-7.0	0	0	
	11-22	15-20	---	5.3-6.4	0	0	
	22-35	15-20	11-15	5.3-6.4	0	0	
	35-62	15-25	11-19	4.5-5.7	0	0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-			Effective			Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	exchange capacity	meq/100 g	cation- exchange capacity	pH	Pct				
	In										
48:											
Carlinton-----	0-2	---	---	20-30	4.5-5.5	0	0	0			
	2-11	13-20	---	---	5.3-7.0	0	0	0			
	11-22	15-20	---	---	5.3-6.4	0	0	0			
	22-35	15-20	11-15	11-15	5.3-6.4	0	0	0			
	35-62	15-25	11-19	11-19	4.5-5.7	0	0	0			
Kruse-----	0-1	---	---	20-30	4.5-5.5	0	0	0			
	1-6	7-18	---	---	5.5-7.3	0	0	0			
	6-14	8-17	---	---	5.1-6.8	0	0	0			
	14-41	8-22	---	---	4.6-7.3	0	0	0			
	41-48	9-18	---	---	4.9-7.3	0	0	0			
	48-61	1-13	---	---	4.5-6.0	0	0	0			
49:											
Carlinton-----	0-2	---	---	20-30	4.5-5.5	0	0	0			
	2-11	13-20	---	---	5.3-7.0	0	0	0			
	11-22	15-20	---	---	5.3-6.4	0	0	0			
	22-35	15-20	11-15	11-15	5.3-6.4	0	0	0			
	35-62	15-25	11-19	11-19	4.5-5.7	0	0	0			
Seddow-----	0-1	---	---	20-30	6.1-7.3	0	0	0			
	1-3	15-20	---	---	6.2-7.0	0	0	0			
	3-5	15-20	---	---	5.8-6.2	0	0	0			
	5-13	15-20	---	---	5.6-6.2	0	0	0			
	13-35	20-30	---	---	5.6-6.6	0	0	0			
	35-44	20-25	---	---	5.6-6.5	0	0	0			
	44-54	---	---	---	---	---	---	---			
50:											
Caseycreek-----	0-1	---	---	20-30	6.1-7.3	0	0	0			
	1-4	15-25	---	---	5.1-6.5	0	0	0			
	4-7	15-20	11-16	11-16	5.0-5.7	0	0	0			
	7-16	8-25	6-20	6-20	4.6-6.4	0	0	0			
	16-22	15-20	11-16	11-16	4.6-6.4	0	0	0			
	22-48	4-15	3-11	3-11	4.5-5.3	0	0	0			
	48-66	2-15	1-11	1-11	4.6-5.5	0	0	0			
51:											
Cavendish-----	0-8	15-20	---	---	5.8-7.0	0	0	0			
	8-30	20-25	---	---	5.7-6.6	0	0	0			
	30-43	20-25	---	---	5.5-6.8	0	0	0			
	43-53	---	---	---	---	---	---	---			

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
52: Cavendish-----	0-8	15-20	---	5.8-7.0	0	0	
	8-30	20-25	---	5.7-6.6	0	0	
	30-43	20-25	---	5.5-6.8	0	0	
	43-53	---	---	---	---	---	
Taney-----	0-10	20-25	---	5.8-7.0	0	0	
	10-31	11-20	---	5.5-6.2	0	0	
	31-60	20-30	---	5.6-6.2	0	0	
53: Cobbler-----	0-3	---	20-30	4.5-5.5	0	0	
	3-4	---	20-30	4.5-5.5	0	0	
	4-7	12-16	---	5.7-6.1	0	0	
	7-16	8-12	---	5.3-5.8	0	0	
	16-26	5-9	---	5.3-6.3	0	0	
	26-50	5-9	---	5.3-6.1	0	0	
	50-59	4-6	---	5.3-5.8	0	0	
	59-68	4-6	---	5.4-5.8	0	0	
Aldermand-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	15-25	11-16	5.0-7.2	0	0	
	7-17	15-25	---	5.4-7.1	0	0	
	17-25	7-10	4-9	4.9-6.8	0	0	
	25-33	7-10	---	4.7-6.4	0	0	
	33-44	4-7	8-9	4.6-6.4	0	0	
	44-62	1-5	---	4.6-6.5	0	0	
54: Cobbler-----	0-3	---	20-30	4.5-5.5	0	0	
	3-4	---	20-30	4.5-5.5	0	0	
	4-7	12-16	---	5.7-6.1	0	0	
	7-16	8-12	---	5.3-5.8	0	0	
	16-26	5-9	---	5.3-6.3	0	0	
	26-50	5-9	---	5.3-6.1	0	0	
	50-59	4-6	---	5.3-5.8	0	0	
	59-68	4-6	---	5.4-5.8	0	0	
Noil-----	0-1	---	20-30	4.5-5.5	0	0	
	1-9	20-35	---	5.4-7.5	0	0	
	9-19	8-27	---	5.0-6.5	0	0	
	19-29	4-20	---	4.9-6.2	0	0	
	29-43	5-15	---	5.0-6.2	0	0	
	43-53	---	---	---	---	---	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g					
	In				pH	Pct	Pct	mm
55: Cranberry-----	0-1	---	20-30	20-30	4.5-5.5	0	0	
	1-2	---	20-30	20-30	4.5-5.5	0	0	
	2-5	15-25	---	---	5.6-6.5	0	0	
	5-11	15-25	---	---	6.1-6.5	0	0	
	11-16	10-20	---	---	5.6-6.5	0	0	
	16-22	10-25	---	---	5.1-6.5	0	0	
	22-32	10-20	---	---	5.6-6.5	0	0	
	32-40	15-25	---	---	4.5-6.5	0	0	
	40-50	15-25	---	---	4.5-6.5	0	0	
	50-57	20-30	---	---	4.5-6.5	0	0	
	57-62	20-25	---	---	4.5-6.5	0	0	
Riswold-----	0-1	---	20-30	20-30	6.1-7.3	0	0	
	1-9	14-25	---	---	5.9-7.3	0	0	
	9-17	13-20	---	---	5.6-7.3	0	0	
	17-27	15-25	---	---	5.2-6.5	0	0	
	27-44	15-25	---	---	5.0-6.5	0	0	
	44-60	18-24	---	---	5.6-7.3	0	0	
	60-72	20-28	---	---	5.9-7.3	0	0	
56: Crumarine-----	0-3	14-20	---	---	4.9-6.0	0	0	
	3-13	9-15	---	---	5.6-6.3	0	0	
	13-44	5-8	---	---	5.2-6.5	0	0	
	44-60	---	---	---	5.6-7.3	0	0	
57: Dam-----	---	---	---	---	---	---	---	
58: Driscoll-----	0-13	17-29	---	---	5.6-6.5	0	0	
	13-20	13-28	---	---	5.6-7.3	0	0	
	20-24	8-22	---	---	5.6-7.3	0	0	
	24-54	18-34	---	---	5.6-7.3	0	0	
	54-70	6-31	---	---	5.6-7.8	2-5	0	
59: Driscoll-----	0-13	17-29	---	---	5.6-6.5	0	0	
	13-20	13-28	---	---	5.6-7.3	0	0	
	20-24	8-22	---	---	5.6-7.3	0	0	
	24-54	18-34	---	---	5.6-7.3	0	0	
	54-70	6-31	---	---	5.6-7.8	2-5	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
59: Larkin-----	0-2 2-21 21-62	--- 13-21 15-28	20-30 --- ---	6.1-7.3 5.6-7.3 5.6-7.3	0 0 0	0 0 0	
60: Dullaxe, high elevation---	0-2 2-7 7-19 19-27 27-38 38-46 46-66	--- 8-15 6-15 6-10 4-10 5-10 ---	20-30 --- --- --- --- --- 1-7	6.1-7.3 5.6-6.8 5.6-7.0 4.9-6.5 4.9-6.5 4.7-5.8 4.6-5.9	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
Dullaxe-----	0-2 2-7 7-19 19-27 27-38 38-46 46-66	--- 8-15 6-15 6-10 4-10 5-10 ---	20-30 --- --- --- --- --- 1-7	6.1-7.3 5.6-6.8 5.6-7.0 4.9-6.5 4.9-6.5 4.7-5.8 4.6-5.9	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
61: Dullaxe, dry-----	0-2 2-7 7-19 19-27 27-38 38-46 46-66	--- 8-15 6-15 6-10 4-10 5-10 ---	20-30 --- --- --- --- --- 1-7	6.1-7.3 5.6-6.8 5.6-7.0 4.9-6.5 4.9-6.5 4.7-5.8 4.6-5.9	0 0 0 0 0 0 0	0 0 0 0 0 0 0	
Dullaxe, wet-----	0-2 2-7 7-19 19-27 27-38 38-46 46-66	--- 8-15 6-15 6-10 4-10 5-10 ---	20-30 --- --- --- --- --- 1-7	6.1-7.3 5.6-6.8 5.6-7.0 4.9-6.5 4.9-6.5 4.7-5.8 4.6-5.9	0 0 0 0 0 0 0	0 0 0 0 0 0 0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g				
	In					pH	Pct	Pct	mm
62: Dullaxe-----	0-2	---	20-30	6.1-7.3	0	0			
	2-7	8-15	---	5.6-6.8	0	0			
	7-19	6-15	---	5.6-7.0	0	0			
	19-27	6-10	---	4.9-6.5	0	0			
	27-38	4-10	---	4.9-6.5	0	0			
	38-46	5-10	---	4.7-5.8	0	0			
	46-66	---	1-7	4.6-5.9	0	0			
Brodeer-----	0-1	---	20-30	6.1-7.3	0	0			
	1-2	---	20-30	6.1-7.3	0	0			
	2-4	15-25	27-32	5.2-7.0	0	0			
	4-21	15-25	27-32	5.5-7.0	0	0			
	21-59	10-15	12-15	4.7-6.8	0	0			
	59-67	5-10	6-11	4.6-6.0	0	0			
63: Dullaxe-----	0-2	---	20-30	6.1-7.3	0	0			
	2-7	8-15	---	5.6-6.8	0	0			
	7-19	6-15	---	5.6-7.0	0	0			
	19-27	6-10	---	4.9-6.5	0	0			
	27-38	4-10	---	4.9-6.5	0	0			
	38-46	5-10	---	4.7-5.8	0	0			
	46-66	---	1-7	4.6-5.9	0	0			
Brodeer-----	0-1	---	20-30	6.1-7.3	0	0			
	1-2	---	20-30	6.1-7.3	0	0			
	2-4	15-25	27-32	5.2-7.0	0	0			
	4-21	15-25	27-32	5.5-7.0	0	0			
	21-59	10-15	12-15	4.7-6.8	0	0			
	59-67	5-10	6-11	4.6-6.0	0	0			
64: Dullaxe-----	0-2	---	20-30	6.1-7.3	0	0			
	2-7	8-15	---	5.6-6.8	0	0			
	7-19	6-15	---	5.6-7.0	0	0			
	19-27	6-10	---	4.9-6.5	0	0			
	27-38	4-10	---	4.9-6.5	0	0			
	38-46	5-10	---	4.7-5.8	0	0			
	46-66	---	1-7	4.6-5.9	0	0			

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
64: Judgetown-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	11-21	---	5.6-7.0	0	0	
	4-17	7-14	---	5.0-6.8	0	0	
	17-30	4-14	---	5.0-6.3	0	0	
	30-52	---	1-5	4.3-6.3	0	0	
	52-62	---	---	---	---	---	
65: Dullaxe-----	0-2	---	20-30	6.1-7.3	0	0	
	2-7	8-15	---	5.6-6.8	0	0	
	7-19	6-15	---	5.6-7.0	0	0	
	19-27	6-10	---	4.9-6.5	0	0	
	27-38	4-10	---	4.9-6.5	0	0	
	38-46	5-10	---	4.7-5.8	0	0	
	46-66	---	1-7	4.6-5.9	0	0	
Judgetown, moist-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	11-21	---	5.6-7.0	0	0	
	4-17	7-14	---	5.0-6.8	0	0	
	17-30	4-14	---	5.0-6.3	0	0	
	30-52	---	1-5	4.3-6.3	0	0	
	52-62	---	---	---	---	---	
66: Dullaxe-----	0-2	---	20-30	6.1-7.3	0	0	
	2-7	8-15	---	5.6-6.8	0	0	
	7-19	6-15	---	5.6-7.0	0	0	
	19-27	6-10	---	4.9-6.5	0	0	
	27-38	4-10	---	4.9-6.5	0	0	
	38-46	5-10	---	4.7-5.8	0	0	
	46-66	---	1-7	4.6-5.9	0	0	
Jury, moist-----	0-2	---	20-30	6.1-7.3	0	0	
	2-6	9-18	---	5.2-6.8	0	0	
	6-29	7-14	---	5.2-6.7	0	0	
	29-48	4-15	---	4.8-6.4	0	0	
	48-62	1-11	---	4.5-6.0	0	0	
67: Dumps, wood slash-----	---	---	---	---	---	---	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange capacity	exchange capacity	cation- exchange capacity	cation- exchange capacity	reaction	reaction	carbonate	carbonate	
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pH	Pct	Pct	mm
68: Dworshak-----	In									
	0-2	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
	2-3	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
	3-11	20-25	20-25	---	---	5.8-7.1	5.8-7.1	0	0	
	11-18	20-25	20-25	---	---	6.4-7.0	6.4-7.0	0	0	
69: Dworshak-----	18-31	20-25	20-25	---	---	5.2-6.8	5.2-6.8	0	0	
	31-63	12-22	12-22	20-25	20-25	4.8-6.4	4.8-6.4	0	0	
	0-2	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
	2-3	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
	3-11	20-25	20-25	---	---	5.8-7.1	5.8-7.1	0	0	
Brequito-----	11-18	20-25	20-25	---	---	6.4-7.0	6.4-7.0	0	0	
	18-31	20-25	20-25	---	---	5.2-6.8	5.2-6.8	0	0	
	31-63	12-22	12-22	20-25	20-25	4.8-6.4	4.8-6.4	0	0	
	0-1	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
	1-3	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
70: Elkberry-----	3-5	15-25	15-25	26-30	26-30	5.4-6.8	5.4-6.8	0	0	
	5-11	15-20	15-20	24-28	24-28	5.4-6.8	5.4-6.8	0	0	
	11-20	15-20	15-20	14-17	14-17	5.4-6.5	5.4-6.5	0	0	
	20-37	14-20	14-20	23-29	23-29	4.5-6.4	4.5-6.4	0	0	
	37-67	9-13	9-13	18-22	18-22	4.5-6.0	4.5-6.0	0	0	
Elkberry-----	0-1	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
	1-3	15-42	15-42	11-33	11-33	4.5-6.5	4.5-6.5	0	0	
	3-16	9-27	9-27	6-20	6-20	5.4-6.5	5.4-6.5	0	0	
	16-19	11-17	11-17	8-13	8-13	4.5-6.0	4.5-6.0	0	0	
	19-25	10-17	10-17	7-13	7-13	4.5-6.0	4.5-6.0	0	0	
Elkberry, wet-----	25-36	9-17	9-17	7-13	7-13	4.5-5.5	4.5-5.5	0	0	
	36-45	9-17	9-17	6-13	6-13	4.5-5.5	4.5-5.5	0	0	
	45-55	9-15	9-15	7-11	7-11	4.5-5.5	4.5-5.5	0	0	
	55-65	8-11	8-11	6-8	6-8	4.5-5.5	4.5-5.5	0	0	
	0-1	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
Elkberry, wet-----	1-3	15-42	15-42	11-33	11-33	4.5-6.5	4.5-6.5	0	0	
	3-16	9-27	9-27	6-20	6-20	5.4-6.5	5.4-6.5	0	0	
	16-19	11-17	11-17	8-13	8-13	4.5-6.0	4.5-6.0	0	0	
	19-25	10-17	10-17	7-13	7-13	4.5-6.0	4.5-6.0	0	0	
	25-36	9-17	9-17	7-13	7-13	4.5-5.5	4.5-5.5	0	0	
Elkberry, wet-----	36-45	9-17	9-17	6-13	6-13	4.5-5.5	4.5-5.5	0	0	
	45-55	9-15	9-15	7-11	7-11	4.5-5.5	4.5-5.5	0	0	
	55-65	8-11	8-11	6-8	6-8	4.5-5.5	4.5-5.5	0	0	
	0-1	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	
	1-3	15-42	15-42	11-33	11-33	4.5-6.5	4.5-6.5	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
71: Elkberry-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-42	11-33	4.5-6.5	0	0	
	3-16	9-27	6-20	5.4-6.5	0	0	
	16-19	11-17	8-13	4.5-6.0	0	0	
	19-25	10-17	7-13	4.5-6.0	0	0	
	25-36	9-17	7-13	4.5-5.5	0	0	
	36-45	9-17	6-13	4.5-5.5	0	0	
	45-55	9-15	7-11	4.5-5.5	0	0	
	55-65	8-11	6-8	4.5-5.5	0	0	
Dworshak-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-11	20-25	---	5.8-7.1	0	0	
	11-18	20-25	---	6.4-7.0	0	0	
	18-31	20-25	---	5.2-6.8	0	0	
	31-63	12-22	20-25	4.8-6.4	0	0	
72: Elkridge-----	0-2	---	20-30	4.5-5.5	0	0	
	2-6	15-25	---	5.8-7.0	0	0	
	6-13	15-25	---	6.1-7.0	0	0	
	13-41	15-20	---	5.6-7.0	0	0	
	41-62	15-20	---	5.3-6.8	0	0	
Riswold-----	0-1	---	20-30	4.5-5.5	0	0	
	1-9	14-25	---	5.9-7.3	0	0	
	9-17	13-20	---	5.6-7.3	0	0	
	17-27	15-25	---	5.2-6.5	0	0	
	27-44	15-25	---	5.0-6.5	0	0	
	44-60	18-24	---	5.6-7.3	0	0	
	60-72	20-28	---	5.9-7.3	0	0	
73: Elkridge-----	0-2	---	20-30	4.5-5.5	0	0	
	2-6	15-25	---	5.8-7.0	0	0	
	6-13	15-25	---	6.1-7.0	0	0	
	13-41	15-20	---	5.6-7.0	0	0	
	41-62	15-20	---	5.3-6.8	0	0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g				
	In					pH	Pct	Pct	mm
73: Riswold-----	0-1	---	20-30	4.5-5.5	0	0	0	0	
	1-9	14-25	---	5.9-7.3	0	0	0	0	
	9-17	13-20	---	5.6-7.3	0	0	0	0	
	17-27	15-25	---	5.2-6.5	0	0	0	0	
	27-44	15-25	---	5.0-6.5	0	0	0	0	
	44-60	18-24	---	5.6-7.3	0	0	0	0	
	60-72	20-28	---	5.9-7.3	0	0	0	0	
74: Fico, dry-----	0-1	---	20-30	6.1-7.3	0	0	0	0	
	1-3	---	20-30	6.1-7.3	0	0	0	0	
	3-8	15-25	---	5.3-7.3	0	0	0	0	
	8-17	12-16	---	5.6-7.3	0	0	0	0	
	17-25	6-12	---	4.5-6.5	0	0	0	0	
	25-56	3-6	---	4.5-6.5	0	0	0	0	
	56-66	---	---	---	---	---	---	---	
Huclerit, warm-----	0-1	---	20-30	6.1-7.3	0	0	0	0	
	1-2	---	20-30	6.1-7.3	0	0	0	0	
	2-6	25-35	---	4.6-5.8	0	0	0	0	
	6-14	20-30	---	4.9-5.5	0	0	0	0	
	14-21	20-30	---	5.2-5.6	0	0	0	0	
	21-28	7-10	---	4.7-5.5	0	0	0	0	
	28-36	6-9	---	4.6-5.3	0	0	0	0	
	36-48	6-9	---	4.9-5.1	0	0	0	0	
	48-62	3-6	---	4.9-5.1	0	0	0	0	
75: Fico-----	0-1	---	20-30	6.1-7.3	0	0	0	0	
	1-3	---	20-30	6.1-7.3	0	0	0	0	
	3-8	15-25	---	5.3-7.3	0	0	0	0	
	8-17	12-16	---	5.6-7.3	0	0	0	0	
	17-25	6-12	---	4.5-6.5	0	0	0	0	
	25-56	3-6	---	4.5-6.5	0	0	0	0	
	56-66	---	---	---	---	---	---	---	
Weitas-----	0-14	15-20	---	4.5-6.0	0	0	0	0	
	14-22	9-12	---	4.5-6.0	0	0	0	0	
	22-37	9-12	---	4.5-6.0	0	0	0	0	
	37-43	1-6	---	5.1-6.5	0	0	0	0	
	43-60	4-9	---	4.5-6.0	0	0	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sam
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
76: Flawsie, high precipitation-----	0-4 4-15 15-37 37-60	15-30 10-24 2-7 1-4	--- --- --- ---	6.1-7.3 6.1-7.3 5.6-7.3 5.1-6.5	0 0 0 0	0 0 0 0	
77: Flawsie, low precipitation	0-1 1-2 2-7 7-13 13-16 16-23 23-31 31-46 46-62	--- --- 8-35 6-14 6-12 4-12 3-12 3-8 3-8	20-30 20-30 --- --- --- --- --- --- ---	4.5-5.5 4.5-5.5 5.8-6.8 5.4-6.8 5.4-6.8 4.8-6.5 4.8-6.5 4.8-6.5 4.6-6.3	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	
Flawsie, dry-----	0-1 1-2 2-7 7-13 13-16 16-23 23-31 31-46 46-62	--- --- 8-35 6-14 6-12 4-12 3-12 3-8 3-8	20-30 20-30 --- --- --- --- --- --- ---	4.5-5.5 4.5-5.5 5.8-6.8 5.4-6.8 5.4-6.8 4.8-6.5 4.8-6.5 4.8-6.5 4.6-6.3	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	
78: Floodwood-----	0-5 5-12 12-38 38-60	15-30 10-24 10-20 1-7	--- --- --- ---	6.1-7.3 6.1-7.3 5.6-6.5 5.1-6.5	0 0 0 0	0 0 0 0	
79: Floodwood, warm-----	0-1 1-3 3-13 13-35 35-55 55-63	--- 15-30 10-24 10-20 8-14 1-7	20-30 --- --- --- 6-11 0-5	4.5-5.5 5.3-7.0 5.1-6.8 4.6-6.5 4.4-6.0 4.3-5.6	0 0 0 0 0 0	0 0 0 0 0 0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity	
		meq/100 g	meq/100 g	meq/100 g	pH	Pct	Pct			
79:	In									
Keeler-----	0-1	---	20-30	6.1-7.3		0	0			
	1-5	8-20	---	5.6-7.1		0	0			
	5-12	7-15	---	5.4-6.7		0	0			
	12-39	8-18	---	4.9-6.3		0	0			
	39-48	7-20	---	4.9-6.2		0	0			
	48-74	7-20	---	4.0-6.2		0	0			
80:										
Floodwood-----	0-5	15-30	---	6.1-7.3		0	0			
	5-12	10-24	---	6.1-7.3		0	0			
	12-38	10-20	---	5.6-6.5		0	0			
	38-60	1-7	---	5.1-6.5		0	0			
Keeler, warm-----	0-1	---	20-30	6.1-7.3		0	0			
	1-2	---	20-30	6.1-7.3		0	0			
	2-7	10-20	---	6.1-7.3		0	0			
	7-18	7-14	---	6.1-7.3		0	0			
	18-38	8-18	---	5.6-6.5		0	0			
	38-62	7-20	---	5.6-6.5		0	0			
81:										
Floodwood-----	0-5	15-30	---	6.1-7.3		0	0			
	5-12	10-24	---	6.1-7.3		0	0			
	12-38	10-20	---	5.6-6.5		0	0			
	38-60	1-7	---	5.1-6.5		0	0			
Keeler, warm-----	0-1	---	20-30	6.1-7.3		0	0			
	1-2	---	20-30	6.1-7.3		0	0			
	2-7	10-20	---	6.1-7.3		0	0			
	7-18	7-14	---	6.1-7.3		0	0			
	18-38	8-18	---	5.6-6.5		0	0			
	38-62	7-20	---	5.6-6.5		0	0			
82:										
Flumecreek-----	0-1	---	20-30	6.1-7.3		0	0			
	1-2	---	20-30	6.1-7.3		0	0			
	2-10	9-17	---	5.5-6.4		0	0			
	10-21	6-11	---	5.8-6.2		0	0			
	21-32	7-11	---	5.6-6.5		0	0			
	32-43	---	---	5.1-5.8		0	0			
	43-52	---	---	4.8-5.7		0	0			
	52-67	---	---	4.6-5.7		0	0			

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
83: Flumecreek-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-10	9-17	---	5.5-6.4	0	0	
	10-21	6-11	---	5.8-6.2	0	0	
	21-32	7-11	---	5.6-6.5	0	0	
	32-43	---	---	5.1-5.8	0	0	
	43-52	---	---	4.8-5.7	0	0	
	52-67	---	---	4.6-5.7	0	0	
Stepoff-----	0-3	---	20-30	6.1-7.3	0	0	
	3-8	15-25	---	3.8-5.0	0	0	
	8-24	15-25	---	4.1-5.3	0	0	
	24-38	11-15	---	4.5-5.3	0	0	
	38-46	4-11	---	4.5-5.3	0	0	
	46-63	4-9	---	4.8-5.1	0	0	
Dworshak, dry-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-11	20-25	---	5.8-7.1	0	0	
	11-18	20-25	---	6.4-7.0	0	0	
	18-31	20-25	---	5.2-6.8	0	0	
	31-63	12-22	20-25	4.8-6.4	0	0	
84: Fordcreek-----	0-6	10-25	18-27	6.1-7.3	0	0	
	6-16	15-25	18-22	5.8-7.3	0	0	
	16-27	25-35	21-40	5.8-7.3	0	0	
	27-41	25-35	20-40	5.8-7.3	0	0	
	41-51	---	---	---	---	---	
85: Fordcreek-----	0-6	10-25	18-27	6.1-7.3	0	0	
	6-16	15-25	18-22	5.8-7.3	0	0	
	16-27	25-35	21-40	5.8-7.3	0	0	
	27-41	25-35	20-40	5.8-7.3	0	0	
	41-51	---	---	---	---	---	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
86: Garveson, high precipitation-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-4	15-30	---	5.6-7.3	0	0	
	4-18	10-24	---	5.6-7.3	0	0	
	18-25	2-5	---	5.6-6.5	0	0	
	25-62	---	1-3	4.5-6.0	0	0	
Floodwood-----	0-5	15-30	---	6.1-7.3	0	0	
	5-12	10-24	---	6.1-7.3	0	0	
	12-38	10-20	---	5.6-6.5	0	0	
	38-60	1-7	---	5.1-6.5	0	0	
87: Gramil-----	0-12	20-25	---	5.3-6.0	0	0	
	12-19	20-25	---	5.4-6.0	0	0	
	19-27	15-20	---	4.8-5.8	0	0	
	27-39	---	30-35	4.5-6.0	0	0	
	39-70	---	20-30	4.5-6.0	0	0	
Lewhand-----	0-8	---	20-35	4.3-6.0	0	0	
	8-12	---	15-25	4.5-6.0	0	0	
	12-18	---	10-15	4.9-6.0	0	0	
	18-32	12-25	---	5.2-6.8	0	0	
	32-60	10-20	---	4.5-6.9	0	0	
88: Gramil-----	0-12	20-25	---	5.3-6.0	0	0	
	12-19	20-25	---	5.4-6.0	0	0	
	19-27	15-20	---	4.8-5.8	0	0	
	27-39	---	30-35	4.5-6.0	0	0	
	39-70	---	20-30	4.5-6.0	0	0	
Reggear-----	0-1	---	20-30	6.1-7.3	0	0	
	1-8	15-20	---	5.6-7.3	0	0	
	8-13	15-20	---	5.5-6.8	0	0	
	13-22	13-20	---	4.8-6.5	0	0	
	22-31	15-20	---	4.5-6.2	0	0	
	31-60	15-25	---	4.5-6.4	0	0	
	60-86	15-25	---	4.8-6.0	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g				
	In				pH		Pct	Pct	mm
89: Grandad-----	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-25	---	5.3-6.6	0	0			
	3-19	15-25	---	5.5-6.6	0	0			
	19-30	10-15	---	4.9-6.2	0	0			
	30-39	6-15	---	4.5-6.5	0	0			
	39-45	7-15	---	4.7-5.9	0	0			
90: Grandad, dry-----	45-58	2-10	---	4.8-6.4	0	0			
	58-64	2-10	---	4.8-6.4	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-25	---	5.3-6.6	0	0			
	3-19	15-25	---	5.5-6.6	0	0			
	19-30	10-15	---	4.9-6.2	0	0			
Grandad-----	30-39	6-15	---	4.5-6.5	0	0			
	39-45	7-15	---	4.7-5.9	0	0			
	45-58	2-10	---	4.8-6.4	0	0			
	58-64	2-10	---	4.8-6.4	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-25	---	5.3-6.6	0	0			
91: Grandad, dry-----	3-19	15-25	---	5.5-6.6	0	0			
	19-30	10-15	---	4.9-6.2	0	0			
	30-39	6-15	---	4.5-6.5	0	0			
	39-45	7-15	---	4.7-5.9	0	0			
	45-58	2-10	---	4.8-6.4	0	0			
	58-64	2-10	---	4.8-6.4	0	0			
Grandad, dry-----	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-25	---	5.3-6.6	0	0			
	3-19	15-25	---	5.5-6.6	0	0			
	19-30	10-15	---	4.9-6.2	0	0			
	30-39	6-15	---	4.5-6.5	0	0			
	39-45	7-15	---	4.7-5.9	0	0			
Grandad, dry-----	45-58	2-10	---	4.8-6.4	0	0			
	58-64	2-10	---	4.8-6.4	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-25	---	5.3-6.6	0	0			
	3-19	15-25	---	5.5-6.6	0	0			
	19-30	10-15	---	4.9-6.2	0	0			
Grandad, dry-----	30-39	6-15	---	4.5-6.5	0	0			
	39-45	7-15	---	4.7-5.9	0	0			
	45-58	2-10	---	4.8-6.4	0	0			
	58-64	2-10	---	4.8-6.4	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-25	---	5.3-6.6	0	0			

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
91: Grandad	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-25	---	5.3-6.6	0	0	
	3-19	15-25	---	5.5-6.6	0	0	
	19-30	10-15	---	4.9-6.2	0	0	
	30-39	6-15	---	4.5-6.5	0	0	
	39-45	7-15	---	4.7-5.9	0	0	
	45-58	2-10	---	4.8-6.4	0	0	
	58-64	2-10	---	4.8-6.4	0	0	
92: Grandad	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-25	---	5.3-6.6	0	0	
	3-19	15-25	---	5.5-6.6	0	0	
	19-30	10-15	---	4.9-6.2	0	0	
	30-39	6-15	---	4.5-6.5	0	0	
	39-45	7-15	---	4.7-5.9	0	0	
	45-58	2-10	---	4.8-6.4	0	0	
	58-64	2-10	---	4.8-6.4	0	0	
Rettig	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
	93: Grandad, wet	0-1	---	20-30	4.5-5.5	0	0
1-3		15-25	---	5.3-6.6	0	0	
3-19		15-25	---	5.5-6.6	0	0	
19-30		10-15	---	4.9-6.2	0	0	
30-39		6-15	---	4.5-6.5	0	0	
39-45		7-15	---	4.7-5.9	0	0	
45-58		2-10	---	4.8-6.4	0	0	
58-64		2-10	---	4.8-6.4	0	0	
Rettig, wet	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
94: Grandad, dry-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-25	---	5.3-6.6	0	0	
	3-19	15-25	---	5.5-6.6	0	0	
	19-30	10-15	---	4.9-6.2	0	0	
	30-39	6-15	---	4.5-6.5	0	0	
	39-45	7-15	---	4.7-5.9	0	0	
	45-58	2-10	---	4.8-6.4	0	0	
	58-64	2-10	---	4.8-6.4	0	0	
Scand-----	0-1	---	20-30	4.5-5.5	0	0	
	1-4	15-25	---	5.5-6.5	0	0	
	4-16	15-25	---	5.6-6.5	0	0	
	16-27	8-12	6-9	4.5-6.0	0	0	
	27-53	9-13	7-10	5.0-5.5	0	0	
	53-63	---	5-12	5.1-5.5	0	0	
95: Grangemont-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-7	15-25	---	5.6-6.8	0	0	
	7-14	15-25	---	5.1-6.5	0	0	
	14-38	12-20	9-15	4.6-6.3	0	0	
	38-95	15-20	11-15	4.8-6.6	0	0	
Kauder-----	0-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	---	4.4-7.3	0	0	
	4-15	15-25	---	4.4-7.3	0	0	
	15-23	9-11	---	4.5-6.5	0	0	
	23-34	8-17	---	4.5-6.5	0	0	
	34-95	10-20	---	4.5-6.5	0	0	
96: Grangemont, dry-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-7	15-25	---	5.6-6.8	0	0	
	7-14	15-25	---	5.1-6.5	0	0	
	14-38	12-20	9-15	4.6-6.3	0	0	
	38-95	15-20	11-15	4.8-6.6	0	0	



Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction		Calcium carbonate		Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pH	Pct	Pct		
96: Kauder, dry	In										
	0-2	---	---	20-30	---	6.1-7.3	---	0	---	0	---
	2-4	15-25	---	---	---	4.4-7.3	---	0	---	0	---
	4-15	15-25	---	---	---	4.4-7.3	---	0	---	0	---
	15-23	15-20	---	---	---	4.5-6.5	---	0	---	0	---
97: Grangemont	23-34	10-15	---	---	---	4.5-6.5	---	0	---	0	---
	34-95	7-14	---	---	---	4.5-6.5	---	0	---	0	---
	0-2	---	---	20-30	---	4.5-5.5	---	0	---	0	---
	2-3	---	---	20-30	---	4.5-5.5	---	0	---	0	---
	3-7	15-25	---	---	---	5.6-6.8	---	0	---	0	---
Kauder, moist	7-14	15-25	---	---	---	5.1-6.5	---	0	---	0	---
	14-38	12-20	---	9-15	---	4.6-6.3	---	0	---	0	---
	38-95	15-20	---	11-15	---	4.8-6.6	---	0	---	0	---
	0-2	---	---	20-30	---	6.1-7.3	---	0	---	0	---
	2-4	15-25	---	---	---	4.4-7.3	---	0	---	0	---
98: Grangemont, wet	4-15	15-25	---	---	---	4.4-7.3	---	0	---	0	---
	15-23	15-20	---	---	---	4.5-6.5	---	0	---	0	---
	23-34	10-15	---	---	---	4.5-6.5	---	0	---	0	---
	34-95	7-14	---	---	---	4.5-6.5	---	0	---	0	---
	0-2	---	---	20-30	---	4.5-5.5	---	0	---	0	---
Riswold	2-3	---	---	20-30	---	4.5-5.5	---	0	---	0	---
	3-7	15-25	---	---	---	5.6-6.8	---	0	---	0	---
	7-14	15-25	---	---	---	5.1-6.5	---	0	---	0	---
	14-38	12-20	---	9-15	---	4.6-6.3	---	0	---	0	---
	38-95	15-20	---	11-15	---	4.8-6.6	---	0	---	0	---
Riswold	0-1	---	---	20-30	---	6.1-7.3	---	0	---	0	---
	1-9	14-25	---	---	---	5.9-7.3	---	0	---	0	---
	9-17	13-20	---	---	---	5.6-7.3	---	0	---	0	---
	17-27	15-25	---	---	---	5.2-6.5	---	0	---	0	---
	27-44	15-25	---	---	---	5.0-6.5	---	0	---	0	---
	44-60	18-24	---	---	---	5.6-7.3	---	0	---	0	---
	60-72	20-28	---	---	---	5.9-7.3	---	0	---	0	---

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
99: Grasshopper-----	0-16 16-22 22-40 40-53 53-58 58-64	20-25 20-25 15-20 20-25 9-13 3-19	--- --- --- --- --- ---	4.6-6.9 4.8-6.5 5.6-6.3 5.6-6.5 5.1-6.5 5.1-6.5	0 0 0 0 0 0	0 0 0 0 0 0	
100: Gwin-----	0-4 4-8 8-13 13-23	13-23 15-22 16-30 ---	--- --- --- ---	6.1-7.0 6.1-7.3 5.9-7.2 ---	0 0 0 ---	0 0 0 ---	
Kettenbach-----	0-3 3-11 11-36 36-46	14-23 15-25 20-28 ---	--- --- --- ---	6.1-7.3 6.1-7.3 5.9-7.3 ---	0 0 0 ---	0 0 0 ---	
101: Gwin-----	0-4 4-8 8-13 13-23	13-23 15-22 16-30 ---	--- --- --- ---	6.1-7.0 6.1-7.3 5.9-7.2 ---	0 0 0 ---	0 0 0 ---	
Kettenbach-----	0-3 3-11 11-36 36-46	14-23 15-25 20-28 ---	--- --- --- ---	6.1-7.3 6.1-7.3 5.9-7.3 ---	0 0 0 ---	0 0 0 ---	
Keuterville-----	0-2 2-11 11-21 21-52 52-64	--- 25-30 25-30 20-30 15-25	20-30 --- --- --- ---	6.1-7.3 6.1-7.3 6.1-7.3 6.1-7.3 6.1-7.3	0 0 0 0 0	0 0 0 0 0	
102: Hildebrand-----	0-4 4-12 12-40 40-60	15-25 15-25 4-18 3-11	--- 11-19 --- ---	5.1-6.5 5.0-5.5 4.5-6.0 5.1-6.0	0 0 0 0	0 0 0 0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct	mm				
102: Spacecreek, dry-----	In										
	0-1	---	20-30	4.5-5.5	0	0					
	1-2	---	20-30	4.5-5.5	0	0					
	2-10	22-40	---	4.5-6.2	0	0					
	10-16	10-27	---	4.8-6.2	0	0					
	16-28	10-40	7-32	4.0-6.0	0	0					
	28-42	5-22	3-17	4.9-5.8	0	0					
	42-64	2-30	1-24	4.7-5.8	0	0					
103: Hubub, wet-----	0-1	---	20-30	4.5-5.5	0	0					
	1-2	---	20-30	4.5-5.5	0	0					
	2-5	15-30	---	5.6-6.8	0	0					
	5-17	10-24	---	5.3-6.3	0	0					
	17-19	8-15	---	4.8-6.3	0	0					
	19-42	11-17	---	4.8-5.9	0	0					
	42-62	11-17	8-20	4.8-6.0	0	0					
104: Hubub, wet-----	0-1	---	20-30	4.5-5.5	0	0					
	1-2	---	20-30	4.5-5.5	0	0					
	2-5	15-30	---	5.6-6.8	0	0					
	5-17	10-24	---	5.3-6.3	0	0					
	17-19	8-15	---	4.8-6.3	0	0					
	19-42	11-17	---	4.8-5.9	0	0					
	42-62	11-17	8-20	4.8-6.0	0	0					
Dworshak-----	0-2	---	20-30	4.5-5.5	0	0					
	2-3	---	20-30	4.5-5.5	0	0					
	3-11	20-25	---	5.8-7.1	0	0					
	11-18	20-25	---	6.4-7.0	0	0					
	18-31	20-25	---	5.2-6.8	0	0					
	31-63	12-22	20-25	4.8-6.4	0	0					
105: Hubub-----	0-1	---	20-30	4.5-5.5	0	0					
	1-2	---	20-30	4.5-5.5	0	0					
	2-5	15-30	---	5.6-6.8	0	0					
	5-17	10-24	---	5.3-6.3	0	0					
	17-19	8-15	---	4.8-6.3	0	0					
	19-42	11-17	---	4.8-5.9	0	0					
	42-62	11-17	8-20	4.8-6.0	0	0					

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
105: Lostpete-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-5	25-35	---	5.1-6.0	0	0	
	5-13	20-30	---	5.1-6.2	0	0	
	13-19	20-30	---	5.1-6.2	0	0	
	19-29	8-14	6-11	4.8-6.2	0	0	
	29-42	9-14	7-9	4.6-6.0	0	0	
	42-52	8-14	6-11	4.6-6.0	0	0	
	52-66	8-15	6-11	4.6-5.8	0	0	
106: Hucberit-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-6	25-35	---	4.6-5.8	0	0	
	6-14	20-30	---	4.9-5.5	0	0	
	14-21	20-30	---	5.2-5.6	0	0	
	21-28	7-10	---	4.7-5.5	0	0	
	28-36	6-9	---	4.6-5.3	0	0	
	36-48	6-9	---	4.9-5.1	0	0	
	48-62	3-6	---	4.9-5.1	0	0	
107: Hucberit-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-6	25-35	---	4.6-5.8	0	0	
	6-14	20-30	---	4.9-5.5	0	0	
	14-21	20-30	---	5.2-5.6	0	0	
	21-28	7-10	---	4.7-5.5	0	0	
	28-36	6-9	---	4.6-5.3	0	0	
	36-48	6-9	---	4.9-5.1	0	0	
	48-62	3-6	---	4.9-5.1	0	0	
Vaywood, high precipitation-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	15-25	---	5.0-6.2	0	0	
	7-15	15-25	---	5.2-6.2	0	0	
	15-20	15-25	---	5.2-6.2	0	0	
	20-25	7-10	---	5.2-5.6	0	0	
	25-38	7-10	---	5.2-5.6	0	0	
	38-47	5-8	---	4.7-5.4	0	0	
	47-62	4-6	---	4.8-5.4	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity	
		meq/100 g	meq/100 g	pH	Pct	Pct				
108: Hugus-----	In									
	0-1	---	20-30	4.5-5.5	0	0				
	1-3	---	20-30	4.5-5.5	0	0				
	3-7	15-30	---	5.2-6.3	0	0				
	7-19	10-24	---	5.4-6.5	0	0				
	19-32	8-20	---	5.2-6.0	0	0				
	32-51	5-15	3-11	4.8-6.1	0	0				
	51-60	2-8	---	4.6-6.0	0	0				
109: Hugus-----	0-1	---	20-30	4.5-5.5	0	0				
	1-3	---	20-30	4.5-5.5	0	0				
	3-7	15-30	---	5.2-6.3	0	0				
	7-19	10-24	---	5.4-6.5	0	0				
	19-32	8-20	---	5.2-6.0	0	0				
	32-51	5-15	3-11	4.8-6.1	0	0				
	51-60	2-8	---	4.6-6.0	0	0				
110: Hugus, moist-----	0-1	---	20-30	4.5-5.5	0	0				
	1-3	---	20-30	4.5-5.5	0	0				
	3-7	15-30	---	5.2-6.3	0	0				
	7-19	10-24	---	5.4-6.5	0	0				
	19-32	8-20	---	5.2-6.0	0	0				
	32-51	5-15	3-11	4.8-6.1	0	0				
	51-60	2-8	---	4.6-6.0	0	0				
111: Hugus, high precipitation	0-1	---	20-30	4.5-5.5	0	0				
	1-3	---	20-30	4.5-5.5	0	0				
	3-7	15-30	---	5.2-6.3	0	0				
	7-19	10-24	---	5.4-6.5	0	0				
	19-32	8-20	---	5.2-6.0	0	0				
	32-51	5-15	3-11	4.8-6.1	0	0				
	51-60	2-8	---	4.6-6.0	0	0				
112: Hugus, moist-----	0-1	---	20-30	4.5-5.5	0	0				
	1-3	---	20-30	4.5-5.5	0	0				
	3-7	15-30	---	5.2-6.3	0	0				
	7-19	10-24	---	5.4-6.5	0	0				
	19-32	8-20	---	5.2-6.0	0	0				
	32-51	5-15	3-11	4.8-6.1	0	0				
	51-60	2-8	---	4.6-6.0	0	0				

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
112: Hugus-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	---	20-30	4.5-5.5	0	0	
	3-7	15-30	---	5.2-6.3	0	0	
	7-19	10-24	---	5.4-6.5	0	0	
	19-32	8-20	---	5.2-6.0	0	0	
	32-51	5-15	3-11	4.8-6.1	0	0	
	51-60	2-8	---	4.6-6.0	0	0	
113: Hugus-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	---	20-30	4.5-5.5	0	0	
	3-7	15-30	---	5.2-6.3	0	0	
	7-19	10-24	---	5.4-6.5	0	0	
	19-32	8-20	---	5.2-6.0	0	0	
	32-51	5-15	3-11	4.8-6.1	0	0	
	51-60	2-8	---	4.6-6.0	0	0	
Dworshak-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-11	20-25	---	5.8-7.1	0	0	
	11-18	20-25	---	6.4-7.0	0	0	
	18-31	20-25	---	5.2-6.8	0	0	
	31-63	12-22	20-25	4.8-6.4	0	0	
114: Itzee-----	0-1	---	20-30	6.1-7.3	0	0	
	1-4	4-9	---	5.9-7.3	0	0	
	4-12	1-7	---	6.0-7.3	0	0	
	12-47	3-13	---	6.4-6.6	0	0	
	47-60	1-6	---	5.6-6.6	0	0	
115: Jacket-----	0-2	---	20-30	6.1-7.3	0	0	
	2-16	20-30	---	6.5-7.0	0	0	
	16-33	30-45	---	6.5-7.0	0	0	
	33-64	30-45	---	6.4-7.2	0	0	
116: Jacket-----	0-7	20-24	---	6.1-7.3	0	0	
	7-27	21-28	---	6.1-7.3	0	0	
	27-56	23-33	---	6.6-7.8	0	0	
	56-63	23-32	---	6.6-7.8	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
117: Jacket-----	0-2	---	20-30	6.1-7.3	0	0	
	2-16	20-30	---	6.5-7.0	0	0	
	16-33	30-45	---	6.5-7.0	0	0	
	33-64	30-45	---	6.4-7.2	0	0	
Wellsbench-----	0-6	20-25	---	6.1-7.3	0	0	
	6-14	25-30	---	5.6-7.3	0	0	
	14-41	25-35	---	5.6-7.3	0	0	
	41-51	---	---	---	---	---	
118: Jacot-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-6	7-18	---	5.4-7.3	0	0	
	6-16	5-15	---	5.3-7.3	0	0	
	16-42	3-8	---	5.1-6.5	0	0	
	42-50	1-3	---	5.1-6.5	0	0	
	50-62	1-3	---	5.1-6.5	0	0	
Garveson-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-4	15-30	---	5.6-7.3	0	0	
	4-18	10-24	---	5.6-7.3	0	0	
	18-25	2-5	---	5.6-6.5	0	0	
	25-62	---	1-3	4.5-6.0	0	0	
119: Jacot-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-6	7-18	---	5.4-7.3	0	0	
	6-16	5-15	---	5.3-7.3	0	0	
	16-42	3-8	---	5.1-6.5	0	0	
	42-50	1-3	---	5.1-6.5	0	0	
	50-62	1-3	---	5.1-6.5	0	0	
Garveson-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-4	15-30	---	5.6-7.3	0	0	
	4-18	10-24	---	5.6-7.3	0	0	
	18-25	2-5	---	5.6-6.5	0	0	
	25-62	---	1-3	4.5-6.0	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
120: Jaype-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-5	15-25	---	5.6-6.5	0	0	
	5-14	15-20	---	5.8-6.2	0	0	
	14-26	8-20	15-25	4.7-6.0	0	0	
	26-72	8-15	8-21	4.5-5.6	0	0	
	72-82	5-30	1-34	4.3-5.8	0	0	
Revling-----	0-2	---	20-30	4.5-5.5	0	0	
	2-7	15-20	---	5.1-7.3	0	0	
	7-21	15-20	---	5.5-7.3	0	0	
	21-35	15-20	---	5.1-6.6	0	0	
	35-86	10-15	7-11	4.1-6.0	0	0	
121: Jaype, dry-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-5	15-25	---	5.6-6.5	0	0	
	5-14	15-20	---	5.8-6.2	0	0	
	14-26	8-20	15-25	4.7-6.0	0	0	
	26-72	8-15	8-21	4.5-5.6	0	0	
	72-82	5-30	1-34	4.3-5.8	0	0	
Revling, dry-----	0-2	---	20-30	4.5-5.5	0	0	
	2-7	15-20	---	5.1-7.3	0	0	
	7-21	15-20	---	5.5-7.3	0	0	
	21-35	15-20	---	5.1-6.6	0	0	
	35-86	10-15	7-11	4.1-6.0	0	0	
122: Jaype-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-5	15-25	---	5.6-6.5	0	0	
	5-14	15-20	---	5.8-6.2	0	0	
	14-26	8-20	15-25	4.7-6.0	0	0	
	26-72	8-15	8-21	4.5-5.6	0	0	
	72-82	5-30	1-34	4.3-5.8	0	0	
Statemeadow-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	14-20	---	5.0-6.0	0	0	
	2-9	14-20	---	5.6-6.9	0	0	
	9-51	13-20	---	5.5-6.0	0	0	
	51-61	13-15	---	4.9-6.5	0	0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct					
123: Joel-----	In										
	0-1	---	20-30	6.1-7.3							
	1-16	20-45	---	5.2-7.0							
	16-27	20-35	---	6.2-6.5							
	27-40	18-23	---	6.0-7.3							
	40-61	20-27	---	5.8-7.5							
Setters-----	0-2	---	20-30	4.5-5.5							
	2-15	15-30	---	6.2-6.8							
	15-28	15-30	---	6.0-6.7							
	28-34	15-40	---	5.7-6.1							
	34-62	20-40	---	5.3-6.5							
124: Johnson-----	0-2	---	20-30	4.5-5.5							
	2-12	11-21	---	6.1-7.0							
	12-22	15-31	---	5.6-6.8							
	22-54	10-30	---	6.0-7.0							
	54-64	---	---	---							
125: Johnson-----	0-2	---	20-30	4.5-5.5							
	2-12	11-21	---	6.1-7.0							
	12-22	15-31	---	5.6-6.8							
	22-54	10-30	---	6.0-7.0							
	54-64	---	---	---							
Swayne-----	0-1	---	20-30	6.1-7.3							
	1-8	15-20	---	6.1-7.3							
	8-14	15-20	---	5.9-7.0							
	14-22	15-20	---	6.0-6.5							
	22-56	20-25	---	5.6-7.3							
	56-61	20-25	---	5.5-7.3							
126: Johnson-----	0-2	---	20-30	4.5-5.5							
	2-12	11-21	---	6.1-7.0							
	12-22	15-31	---	5.6-6.8							
	22-54	10-30	---	6.0-7.0							
	54-64	---	---	---							

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
126: Swayne-----	0-1 1-8 8-14 14-22 22-56 56-61	--- 15-20 15-20 15-20 20-25 20-25	20-30 --- --- --- --- ---	6.1-7.3 6.1-7.3 5.9-7.0 6.0-6.5 5.6-7.3 5.5-7.3	0 0 0 0 0 0	0 0 0 0 0 0	
127: Johnson-----	0-2 2-12 12-22 22-54 54-64	--- 11-21 15-31 10-30 ---	20-30 --- --- --- ---	4.5-5.5 6.1-7.0 5.6-6.8 6.0-7.0 ---	0 0 0 0 ---	0 0 0 0 ---	
Texascreek-----	0-1 1-13 13-25 25-33 33-43	--- 12-15 10-15 7-14 ---	20-30 --- --- --- ---	6.1-7.3 5.8-6.9 5.8-6.8 5.8-6.8 ---	0 0 0 0 ---	0 0 0 0 ---	
128: Jury-----	0-2 2-6 6-29 29-48 48-62	--- 9-18 7-14 4-15 1-11	20-30 --- --- --- ---	6.1-7.3 5.2-6.8 5.2-6.7 4.8-6.4 4.5-6.0	0 0 0 0 0	0 0 0 0 0	
129: Jury-----	0-2 2-6 6-29 29-48 48-62	--- 9-18 7-14 4-15 1-11	20-30 --- --- --- ---	6.1-7.3 5.2-6.8 5.2-6.7 4.8-6.4 4.5-6.0	0 0 0 0 0	0 0 0 0 0	
130: Jury, cold-----	0-2 2-6 6-29 29-48 48-62	--- 9-18 7-14 4-15 1-11	20-30 --- --- --- ---	6.1-7.3 5.2-6.8 5.2-6.7 4.8-6.4 4.5-6.0	0 0 0 0 0	0 0 0 0 0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange capacity	meq/100 g	cation- exchange capacity	meq/100 g	reaction	pH	carbonate	Pct	Gypsum
131: Jury-----	In									
	0-2	---		20-30		6.1-7.3		0		0
	2-6	9-18		---		5.2-6.8		0		0
	6-29	7-14		---		5.2-6.7		0		0
	29-48	4-15		---		4.8-6.4		0		0
Weitas-----	48-62	1-11		---		4.5-6.0		0		0
	0-14	15-20		---		4.5-6.0		0		0
	14-22	9-12		---		4.5-6.0		0		0
	22-37	9-12		---		4.5-6.0		0		0
	37-43	1-6		---		5.1-6.5		0		0
132: Jury-----	43-60	4-9		---		4.5-6.0		0		0
	0-2	---		20-30		6.1-7.3		0		0
	2-6	9-18		---		5.2-6.8		0		0
	6-29	7-14		---		5.2-6.7		0		0
	29-48	4-15		---		4.8-6.4		0		0
Weitas-----	48-62	1-11		---		4.5-6.0		0		0
	0-14	15-20		---		4.5-6.0		0		0
	14-22	9-12		---		4.5-6.0		0		0
	22-37	9-12		---		4.5-6.0		0		0
	37-43	1-6		---		5.1-6.5		0		0
133: Kauder-----	43-60	4-9		---		4.5-6.0		0		0
	0-2	---		20-30		6.1-7.3		0		0
	2-4	15-25		---		4.4-7.3		0		0
	4-15	15-25		---		4.4-7.3		0		0
	15-23	15-20		---		4.5-6.5		0		0
134: Keeler, dry-----	23-34	10-15		---		4.5-6.5		0		0
	34-95	7-14		---		4.5-6.5		0		0
	0-1	---		20-30		6.1-7.3		0		0
	1-5	8-20		---		5.6-7.1		0		0
	5-12	7-15		---		5.4-6.7		0		0
	12-39	8-18		---		4.9-6.3		0		0
	39-48	7-20		---		4.9-6.2		0		0
	48-74	7-20		---		4.0-6.2		0		0

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
134: Keeler-----	0-1	---	20-30	6.1-7.3	0	0	
	1-5	8-20	---	5.6-7.1	0	0	
	5-12	7-15	---	5.4-6.7	0	0	
	12-39	8-18	---	4.9-6.3	0	0	
	39-48	7-20	---	4.9-6.2	0	0	
	48-74	7-20	---	4.0-6.2	0	0	
135: Keeler, moist-----	0-1	---	20-30	6.1-7.3	0	0	
	1-5	8-20	---	5.6-7.1	0	0	
	5-12	7-15	---	5.4-6.7	0	0	
	12-39	8-18	---	4.9-6.3	0	0	
	39-48	7-20	---	4.9-6.2	0	0	
	48-74	7-20	---	4.0-6.2	0	0	
Keeler-----	0-1	---	20-30	6.1-7.3	0	0	
	1-5	8-20	---	5.6-7.1	0	0	
	5-12	7-15	---	5.4-6.7	0	0	
	12-39	8-18	---	4.9-6.3	0	0	
	39-48	7-20	---	4.9-6.2	0	0	
	48-74	7-20	---	4.0-6.2	0	0	
136: Keeler-----	0-1	---	20-30	6.1-7.3	0	0	
	1-5	8-20	---	5.6-7.1	0	0	
	5-12	7-15	---	5.4-6.7	0	0	
	12-39	8-18	---	4.9-6.3	0	0	
	39-48	7-20	---	4.9-6.2	0	0	
	48-74	7-20	---	4.0-6.2	0	0	
136: Keeler-----	0-1	---	20-30	6.1-7.3	0	0	
	1-5	8-20	---	5.6-7.1	0	0	
	5-12	7-15	---	5.4-6.7	0	0	
	12-39	8-18	---	4.9-6.3	0	0	
	39-48	7-20	---	4.9-6.2	0	0	
	48-74	7-20	---	4.0-6.2	0	0	
Aldermand-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	15-25	11-16	5.0-7.2	0	0	
	7-17	15-25	---	5.4-7.1	0	0	
	17-25	7-10	4-9	4.9-6.8	0	0	
	25-33	7-10	---	4.7-6.4	0	0	
	33-44	4-7	8-9	4.6-6.4	0	0	
	44-62	1-5	---	4.6-6.5	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction		Calcium carbonate		Gypsum	
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pH	Pct	Pct	Pct	Pct
137: Keeler-----	In										
	0-1	---	---	20-30	20-30	6.1-7.3	6.1-7.3	0	0	0	0
	1-2	---	---	20-30	20-30	6.1-7.3	6.1-7.3	0	0	0	0
	2-7	10-20	---	---	---	6.1-7.3	6.1-7.3	0	0	0	0
	7-18	7-14	---	---	---	6.1-7.3	6.1-7.3	0	0	0	0
	18-38	8-18	---	---	---	5.6-6.5	5.6-6.5	0	0	0	0
Jacot-----	38-62	7-20	---	---	---	5.6-6.5	5.6-6.5	0	0	0	0
	0-1	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	0	0
	1-2	---	---	20-30	20-30	4.5-5.5	4.5-5.5	0	0	0	0
	2-6	7-18	---	---	---	5.4-7.3	5.4-7.3	0	0	0	0
	6-16	5-15	---	---	---	5.3-7.3	5.3-7.3	0	0	0	0
	16-42	3-8	---	---	---	5.1-6.5	5.1-6.5	0	0	0	0
138: Keeler-----	42-50	1-3	---	---	---	5.1-6.5	5.1-6.5	0	0	0	0
	50-62	1-3	---	---	---	5.1-6.5	5.1-6.5	0	0	0	0
	0-1	---	---	20-30	20-30	6.1-7.3	6.1-7.3	0	0	0	0
	1-5	8-20	---	---	---	5.6-7.1	5.6-7.1	0	0	0	0
	5-12	7-15	---	---	---	5.4-6.7	5.4-6.7	0	0	0	0
	12-39	8-18	---	---	---	4.9-6.3	4.9-6.3	0	0	0	0
Lado-----	39-48	7-20	---	---	---	4.9-6.2	4.9-6.2	0	0	0	0
	48-74	7-20	---	---	---	4.0-6.2	4.0-6.2	0	0	0	0
	0-1	---	---	20-30	20-30	6.1-7.3	6.1-7.3	0	0	0	0
	1-2	---	---	20-30	20-30	6.1-7.3	6.1-7.3	0	0	0	0
	2-4	15-25	---	---	---	5.5-7.1	5.5-7.1	0	0	0	0
	4-20	15-25	---	---	---	5.1-7.0	5.1-7.0	0	0	0	0
139: Kettenbach-----	20-48	15-20	---	---	---	4.8-6.7	4.8-6.7	0	0	0	0
	48-64	10-15	---	---	---	4.8-6.4	4.8-6.4	0	0	0	0
	0-3	14-23	---	---	---	6.1-7.3	6.1-7.3	0	0	0	0
	3-11	15-25	---	---	---	6.1-7.3	6.1-7.3	0	0	0	0
	11-36	20-28	---	---	---	5.9-7.3	5.9-7.3	0	0	0	0
	36-46	---	---	---	---	---	---	---	---	---	---
Gwin-----	0-4	13-23	---	---	---	6.1-7.0	6.1-7.0	0	0	0	0
	4-8	15-22	---	---	---	6.1-7.3	6.1-7.3	0	0	0	0
	8-13	16-30	---	---	---	5.9-7.2	5.9-7.2	0	0	0	0
	13-23	---	---	---	---	---	---	---	---	---	---
	0-60	---	---	---	---	---	---	---	---	---	---
	Rock outcrop-----	---	---	---	---	---	---	---	---	---	---

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pct	pct	mm
140: Kettenbach-----	In								
	0-3	14-23		---		6.1-7.3	0	0	
	3-11	15-25		---		6.1-7.3	0	0	
	11-36	20-28		---		5.9-7.3	0	0	
	36-46	---		---		---	---	---	
Keuterville-----	0-2	---		20-30		6.1-7.3	0	0	
	2-11	25-30		---		6.1-7.3	0	0	
	11-21	25-30		---		6.1-7.3	0	0	
	21-52	20-30		---		6.1-7.3	0	0	
	52-64	15-25		---		6.1-7.3	0	0	
141: Keuterville-----	0-2	---		20-30		6.1-7.3	0	0	
	2-11	25-30		---		6.1-7.3	0	0	
	11-21	25-30		---		6.1-7.3	0	0	
	21-52	20-30		---		6.1-7.3	0	0	
	52-64	15-25		---		6.1-7.3	0	0	
142: Keuterville-----	0-2	---		20-30		6.1-7.3	0	0	
	2-11	25-30		---		6.1-7.3	0	0	
	11-21	25-30		---		6.1-7.3	0	0	
	21-52	20-30		---		6.1-7.3	0	0	
	52-64	15-25		---		6.1-7.3	0	0	
143: Keuterville-----	0-2	---		20-30		6.1-7.3	0	0	
	2-11	25-30		---		6.1-7.3	0	0	
	11-21	25-30		---		6.1-7.3	0	0	
	21-52	20-30		---		6.1-7.3	0	0	
	52-64	15-25		---		6.1-7.3	0	0	
144: Klickson-----	0-2	---		20-30		6.1-7.3	0	0	
	2-11	25-30		---		6.1-7.3	0	0	
	11-21	25-30		---		6.1-7.3	0	0	
	21-52	20-30		---		6.1-7.3	0	0	
	52-64	15-25		---		6.1-7.3	0	0	
Rock outcrop-----	0-60	---		---		---	---	---	
144: Klickson-----	0-2	---		20-30		4.5-5.5	0	0	
	2-15	11-25		---		5.5-7.3	0	0	
	15-21	12-21		---		5.7-7.3	0	0	
	21-35	12-22		---		6.1-7.3	0	0	
	35-62	7-21		---		6.1-7.3	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct					
145: Klickson-----	In										
	0-2	---	20-30	4.5-5.5						0	
	2-15	11-25	---	5.5-7.3						0	
	15-21	12-21	---	5.7-7.3						0	
	21-35	12-22	---	6.1-7.3						0	
	35-62	7-21	---	6.1-7.3						0	
146: Klickson-----	0-2	---	20-30	4.5-5.5						0	
	2-15	11-25	---	5.5-7.3						0	
	15-21	12-21	---	5.7-7.3						0	
	21-35	12-22	---	6.1-7.3						0	
	35-62	7-21	---	6.1-7.3						0	
Agatha-----	0-1	---	20-30	4.5-5.5						0	
	1-2	---	20-30	4.5-5.5						0	
	2-5	9-25	---	5.2-7.3						0	
	5-9	14-19	---	5.1-7.3						0	
	9-20	11-22	---	5.1-6.8						0	
	20-60	10-24	---	5.1-6.8						0	
	60-70	---	---	---						---	
147: Klickson-----	0-2	---	20-30	4.5-5.5						0	
	2-15	11-25	---	5.5-7.3						0	
	15-21	12-21	---	5.7-7.3						0	
	21-35	12-22	---	6.1-7.3						0	
	35-62	7-21	---	6.1-7.3						0	
Kettenbach-----	0-3	14-23	---	6.1-7.3						0	
	3-11	15-25	---	6.1-7.3						0	
	11-36	20-28	---	5.9-7.3						0	
	36-46	---	---	---						---	
148: Klickson-----	0-2	---	20-30	4.5-5.5						0	
	2-15	11-25	---	5.5-7.3						0	
	15-21	12-21	---	5.7-7.3						0	
	21-35	12-22	---	6.1-7.3						0	
	35-62	7-21	---	6.1-7.3						0	
Rock outcrop-----	0-60	---	---	---						---	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sal-
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
148: Kettenbach-----	0-3	14-23	---	6.1-7.3	0	0	
	3-11	15-25	---	6.1-7.3	0	0	
	11-36	20-28	---	5.9-7.3	0	0	
	36-46	---	---	---	---	---	
149: Konkol-----	0-2	---	20-30	5.1-6.7	0	0	
	2-3	---	2-4	5.1-6.7	0	0	
	3-10	---	2-5	5.4-6.7	0	0	
	10-18	5-12	---	4.5-6.7	0	0	
	18-25	---	4-6	4.4-6.7	0	0	
	25-48	---	5-14	4.4-6.7	0	0	
	48-56	---	5-13	4.0-6.0	0	0	
	56-64	---	4-6	4.0-6.0	0	0	
Revling-----	0-2	---	20-30	4.5-5.5	0	0	
	2-7	15-20	---	5.1-7.3	0	0	
	7-21	15-20	---	5.5-7.3	0	0	
	21-35	15-20	---	5.1-6.6	0	0	
	35-86	10-15	7-11	4.1-6.0	0	0	
150: Kooskia-----	0-7	25-35	---	5.6-7.3	0	0	
	7-11	25-35	---	5.6-6.8	0	0	
	11-20	25-35	---	6.4-6.8	0	0	
	20-67	30-45	---	5.8-7.3	0	0	
151: Kooskia-----	0-7	25-35	---	5.6-7.3	0	0	
	7-11	25-35	---	5.6-6.8	0	0	
	11-20	25-35	---	6.4-6.8	0	0	
	20-67	30-45	---	5.8-7.3	0	0	
152: Kruse-----	0-1	---	20-30	4.5-5.5	0	0	
	1-17	11-16	---	5.6-6.5	0	0	
	17-50	13-20	---	6.1-7.3	0	0	
	50-66	9-13	---	6.6-7.3	0	0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity	
		meq/100 g	meq/100 g	pH	Pct	Pct				
153:	In									
Kruse-----	0-1	---	20-30	4.5-5.5						
	1-6	15-20	---	5.5-7.3						
	6-14	15-20	---	5.1-6.8						
	14-41	15-30	---	4.6-7.3						
	41-48	10-20	---	4.9-7.3						
	48-61	10-20	---	4.5-6.0						
154:										
Kruse-----	0-1	---	20-30	4.5-5.5						
	1-6	15-20	---	5.5-7.3						
	6-14	15-20	---	5.1-6.8						
	14-41	15-30	---	4.6-7.3						
	41-48	10-20	---	4.9-7.3						
	48-61	10-20	---	4.5-6.0						
Aldermand-----	0-1	---	20-30	4.5-5.5						
	1-2	---	20-30	4.5-5.5						
	2-7	15-25	11-16	5.0-7.2						
	7-17	15-25	---	5.4-7.1						
	17-25	7-10	4-9	4.9-6.8						
	25-33	7-10	---	4.7-6.4						
	33-44	4-7	8-9	4.6-6.4						
	44-62	1-5	---	4.6-6.5						
155:										
Kruse-----	0-1	---	20-30	4.5-5.5						
	1-6	15-20	---	5.5-7.3						
	6-14	15-20	---	5.1-6.8						
	14-41	15-30	---	4.6-7.3						
	41-48	10-20	---	4.9-7.3						
	48-61	10-20	---	4.5-6.0						
Aldermand-----	0-1	---	20-30	4.5-5.5						
	1-2	---	20-30	4.5-5.5						
	2-7	15-25	11-16	5.0-7.2						
	7-17	15-25	---	5.4-7.1						
	17-25	7-10	4-9	4.9-6.8						
	25-33	7-10	---	4.7-6.4						
	33-44	4-7	8-9	4.6-6.4						
	44-62	1-5	---	4.6-6.5						

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	carbonate	Gypsum	
		meq/100 g		meq/100 g		pH		Pct		
	In							Pct		mm
156:										
Kruse-----	0-1	---		20-30		4.5-5.5		0	0	
	1-6	15-20		---		5.5-7.3		0	0	
	6-14	15-20		---		5.1-6.8		0	0	
	14-41	15-30		---		4.6-7.3		0	0	
	41-48	10-20		---		4.9-7.3		0	0	
	48-61	10-20		---		4.5-6.0		0	0	
McCrosket, dry-----	0-2	---		20-30		6.1-7.3		0	0	
	2-15	15-20		---		5.6-6.6		0	0	
	15-35	6-10		---		4.6-6.2		0	0	
	35-48	6-10		4-7		4.5-6.0		0	0	
	48-58	---		---		---		---	---	
157:										
Kruse-----	0-1	---		20-30		4.5-5.5		0	0	
	1-6	7-18		---		5.5-7.3		0	0	
	6-14	8-17		---		5.1-6.8		0	0	
	14-41	8-22		---		4.6-7.3		0	0	
	41-48	9-18		---		4.9-7.3		0	0	
	48-61	1-13		---		4.5-6.0		0	0	
Noil-----	0-1	---		20-30		4.5-5.5		0	0	
	1-9	20-35		---		5.4-7.5		0	0	
	9-19	8-27		---		5.0-6.5		0	0	
	19-29	4-20		---		4.9-6.2		0	0	
	29-43	5-15		---		5.0-6.2		0	0	
	43-53	---		---		---		---	---	
158:										
Kruse-----	0-1	---		20-30		4.5-5.5		0	0	
	1-6	7-18		---		5.5-7.3		0	0	
	6-14	8-17		---		5.1-6.8		0	0	
	14-41	8-22		---		4.6-7.3		0	0	
	41-48	9-18		---		4.9-7.3		0	0	
	48-61	1-13		---		4.5-6.0		0	0	
Teakean-----	0-1	---		20-30		4.5-5.5		0	0	
	1-13	15-20		---		5.1-6.8		0	0	
	13-23	20-25		---		4.9-6.5		0	0	
	23-42	20-25		---		4.6-6.4		0	0	
	42-61	20-25		---		4.9-6.0		0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct					
159:	In										
Larkin-----	0-2	---	20-30	6.1-7.3							
	2-21	13-21	---	5.6-7.3							
	21-62	15-28	---	5.6-7.3							
Driscoll-----	0-13	17-29	---	5.6-6.5							
	13-20	13-28	---	5.6-7.3							
	20-24	8-22	---	5.6-7.3							
	24-54	18-34	---	5.6-7.3							
	54-70	6-31	---	5.6-7.8							
160:											
Lebaron-----	0-1	---	20-30	4.5-5.5							
	1-9	15-20	---	5.2-6.5							
	9-17	15-20	---	5.3-6.4							
	17-62	15-20	---	5.1-6.8							
Latahco-----	0-1	---	20-30	6.1-7.3							
	1-4	20-32	---	6.1-7.3							
	4-12	15-30	---	6.1-7.3							
	12-27	6-14	---	6.1-7.3							
	27-62	20-30	---	6.3-7.8							
161:											
Lewhand-----	0-8	---	20-35	4.3-6.0							
	8-12	---	15-25	4.5-6.0							
	12-18	---	10-15	4.9-6.0							
	18-32	12-25	---	5.2-6.8							
	32-60	10-20	---	4.5-6.9							
Burntcreek-----	0-7	14-25	---	5.4-6.4							
	7-11	15-25	---	5.3-6.0							
	11-28	15-25	---	5.1-6.0							
	28-36	12-20	---	5.1-6.0							
	36-60	6-15	---	5.3-6.3							
162:											
Lewhand-----	0-8	---	20-35	4.3-6.0							
	8-12	---	15-25	4.5-6.0							
	12-18	---	10-15	4.9-6.0							
	18-32	12-25	---	5.2-6.8							
	32-60	10-20	---	4.5-6.9							

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sam
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
162: Teneb-----	0-7 7-24 24-34 34-64	20-25 --- 15-25 10-30	--- 20-30 --- ---	5.1-6.5 4.5-6.0 4.5-6.5 4.5-6.5	0 0 0 0	0 0 0 0	
163: Longbar-----	0-1 1-2 2-6 6-12 12-28 28-41 41-50 50-62	--- --- 11-21 14-21 15-23 --- --- ---	20-30 20-30 --- --- --- 8-11 5-11 4-6	6.1-7.3 6.1-7.3 5.6-6.0 5.6-6.0 5.6-6.0 5.1-5.9 5.1-5.8 5.1-5.8	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	
Bigtalk-----	0-1 1-3 3-8 8-35 35-48 48-61	--- 13-15 11-13 12-15 9-12 6-9	20-30 --- --- --- --- ---	6.1-7.3 6.1-6.5 6.1-6.5 5.6-6.5 5.6-6.0 5.1-6.0	0 0 0 0 0 0	0 0 0 0 0 0	
164: Longbar-----	0-1 1-2 2-6 6-12 12-28 28-41 41-50 50-62	--- --- 11-21 14-21 15-23 --- --- ---	20-30 20-30 --- --- --- 8-11 5-11 4-6	6.1-7.3 6.1-7.3 5.6-6.0 5.6-6.0 5.6-6.0 5.1-5.9 5.1-5.8 5.1-5.8	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	
Bigtalk-----	0-1 1-3 3-8 8-35 35-48 48-61	--- 13-15 11-13 12-15 9-12 6-9	20-30 --- --- --- --- ---	6.1-7.3 6.1-6.5 6.1-6.5 5.6-6.5 5.6-6.0 5.1-6.0	0 0 0 0 0 0	0 0 0 0 0 0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct					
165: Longpen-----	In										
	0-2	---	20-30	6.1-7.3				0		0	
	2-6	10-20	---	6.1-6.4				0		0	
	6-9	10-15	---	6.2-6.8				0		0	
	9-49	8-15	---	5.8-6.8				0		0	
	49-71	15-25	---	5.3-6.2				0		0	
166: Longpen-----	0-2	---	20-30	6.1-7.3				0		0	
	2-6	10-20	---	6.1-6.4				0		0	
	6-9	10-15	---	6.2-6.8				0		0	
	9-49	8-15	---	5.8-6.8				0		0	
	49-71	15-25	---	5.3-6.2				0		0	
167: Meland-----	0-16	16-23	---	5.6-6.5				0		0	
	16-35	21-28	---	5.6-6.5				0		0	
	35-45	---	---	---				---		---	
Jacket-----	0-7	20-24	---	6.1-7.3				0		0	
	7-27	21-28	---	6.1-7.3				0		0	
	27-56	23-33	---	6.6-7.8				0		0	
	56-63	23-32	---	6.6-7.8				0		0	
168: Meland-----	0-16	16-23	---	5.6-6.5				0		0	
	16-35	21-28	---	5.6-6.5				0		0	
	35-45	---	---	---				---		---	
Keuterville-----	0-13	17-23	---	6.1-7.3				0		0	
	13-49	18-27	---	6.1-7.3				0		0	
	49-61	15-22	---	6.1-7.3				0		0	
169: Mushel-----	0-3	---	20-30	4.5-5.5				0		0	
	3-6	15-30	---	5.1-7.3				0		0	
	6-13	15-30	---	5.6-7.3				0		0	
	13-21	10-20	---	5.5-6.5				0		0	
	21-39	10-20	---	5.1-6.5				0		0	
	39-48	7-15	---	5.1-6.0				0		0	
	48-68	7-15	5-11	5.1-6.0				0		0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
169: Brodeer-----	0-1	---	20-30	6.1-7.3	0	0	
	1-2	---	20-30	6.1-7.3	0	0	
	2-4	15-25	27-32	5.2-7.0	0	0	
	4-21	15-25	27-32	5.5-7.0	0	0	
	21-59	10-15	12-15	4.7-6.8	0	0	
	59-67	5-10	6-11	4.6-6.0	0	0	
170: Mushel-----	0-3	---	20-30	4.5-5.5	0	0	
	3-6	15-30	---	5.1-7.3	0	0	
	6-13	15-30	---	5.6-7.3	0	0	
	13-21	10-20	---	5.5-6.5	0	0	
	21-39	10-20	---	5.1-6.5	0	0	
	39-48	7-15	---	5.1-6.0	0	0	
	48-68	7-15	5-11	5.1-6.0	0	0	
Dullaxe-----	0-2	---	20-30	6.1-7.3	0	0	
	2-7	8-15	---	5.6-6.8	0	0	
	7-19	6-15	---	5.6-7.0	0	0	
	19-27	6-10	---	4.9-6.5	0	0	
	27-38	4-10	---	4.9-6.5	0	0	
	38-46	5-10	---	4.7-5.8	0	0	
	46-66	---	1-7	4.6-5.9	0	0	
171: Nakarna, high precipitation-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-4	15-30	---	6.1-7.3	0	0	
	4-16	10-24	---	6.1-7.3	0	0	
	16-36	3-7	---	5.6-7.3	0	0	
	36-49	1-5	---	5.6-7.3	0	0	
	49-59	---	---	---	---	---	
172: Nakarna, high precipitation-----	0-1	---	20-30	4.5-5.5	0	0	
	1-5	15-30	---	5.8-7.3	0	0	
	5-15	10-24	---	6.0-7.3	0	0	
	15-34	3-15	---	5.1-7.3	0	0	
	34-42	1-10	---	4.9-6.0	0	0	
	42-52	---	---	---	---	---	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction		Calcium carbonate		Gypsum		Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pH	Pct	Pct	Pct	Pct	
173: Nakarna-----	In											mm
	0-1	---	20-30	4.5-5.5				0		0		
	1-5	15-30	---	5.8-7.3				0		0		
	5-15	10-24	---	6.0-7.3				0		0		
	15-34	3-15	---	5.1-7.3				0		0		
	34-42	1-10	---	4.9-6.0				0		0		
	42-52	---	---	---				---		---		
Nakarna, warm-----	0-1	---	20-30	4.5-5.5				0		0		
	1-5	15-30	---	5.8-7.3				0		0		
	5-15	10-24	---	6.0-7.3				0		0		
	15-34	3-15	---	5.1-7.3				0		0		
	34-42	1-10	---	4.9-6.0				0		0		
	42-52	---	---	---				---		---		
174: Narnett-----	0-9	15-25	---	5.3-6.8				0		0		
	9-15	10-20	---	5.2-6.6				0		0		
	15-50	15-20	---	4.9-6.6				0		0		
	50-58	10-20	---	5.0-6.2				0		0		
	58-80	5-20	10-20	4.5-6.2				0		0		
Jury-----	0-2	---	20-30	6.1-7.3				0		0		
	2-6	9-18	---	5.2-6.8				0		0		
	6-29	7-14	---	5.2-6.7				0		0		
	29-48	4-15	---	4.8-6.4				0		0		
	48-62	1-11	---	4.5-6.0				0		0		
175: Neva-----	0-1	---	20-30	4.5-5.5				0		0		
	1-2	---	20-30	4.5-5.5				0		0		
	2-4	20-35	---	6.1-6.3				0		0		
	4-13	15-30	---	6.0-6.5				0		0		
	13-25	13-20	10-15	5.0-6.1				0		0		
	25-50	13-22	10-17	4.3-5.8				0		0		
	50-56	13-15	10-12	5.3-5.7				0		0		
	56-62	8-16	6-12	4.3-5.6				0		0		
176: Newlig-----	0-3	13-15	---	5.5-7.0				0		0		
	3-18	11-15	---	5.9-6.8				0		0		
	18-22	11-15	---	6.0-6.8				0		0		
	22-30	9-14	---	6.2-7.0				0		0		
	30-55	10-15	---	6.3-7.0				0		0		
	55-65	8-11	---	6.4-7.0				0		0		

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
177: Noil-----	0-1	---	20-30	4.5-5.5	0	0	
	1-9	20-35	---	5.4-7.5	0	0	
	9-19	8-27	---	5.0-6.5	0	0	
	19-29	4-20	---	4.9-6.2	0	0	
	29-43	5-15	---	5.0-6.2	0	0	
	43-53	---	---	---	---	---	
Keeler-----	0-1	---	20-30	6.1-7.3	0	0	
	1-5	8-20	---	5.6-7.1	0	0	
	5-12	7-15	---	5.4-6.7	0	0	
	12-39	8-18	---	4.9-6.3	0	0	
	39-48	7-20	---	4.9-6.2	0	0	
	48-74	7-20	---	4.0-6.2	0	0	
178: Noil-----	0-1	---	20-30	4.5-5.5	0	0	
	1-9	20-35	---	5.4-7.5	0	0	
	9-19	8-27	---	5.0-6.5	0	0	
	19-29	4-20	---	4.9-6.2	0	0	
	29-43	5-15	---	5.0-6.2	0	0	
	43-53	---	---	---	---	---	
Bouldercreek, warm-----	0-1	---	20-30	4.5-5.5	0	0	
	1-8	15-30	47-49	5.6-7.3	0	0	
	8-21	15-25	27-31	5.6-7.3	0	0	
	21-27	9-12	15-16	5.1-6.5	0	0	
	27-34	5-11	1-16	5.1-6.5	0	0	
	34-53	5-11	1-3	4.5-6.5	0	0	
	53-69	3-3	1-3	4.2-6.5	0	0	
Rock outcrop-----	0-60	---	---	---	---	---	
179: Norwidge, moist-----	0-3	---	20-30	4.5-5.5	0	0	
	3-6	---	5-6	4.7-6.3	0	0	
	6-17	15-20	---	4.8-6.4	0	0	
	17-26	10-15	---	5.2-6.0	0	0	
	26-42	15-20	11-15	4.6-5.4	0	0	
	42-81	15-25	---	4.7-5.9	0	0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		meq/100 g	exchange capacity	cation- exchange capacity	cation- exchange capacity	reaction	pH	carbonate	pct		
179:	In										
Threebear, moist-----	0-1	---		20-30		6.1-7.3		0		0	
	1-3	15-20		---		5.6-6.4		0		0	
	3-18	15-20		---		5.6-6.4		0		0	
	18-26	---		10-15		5.3-6.3		0		0	
	26-40	---		12-15		4.4-5.6		0		0	
	40-69	---		13-20		4.3-5.4		0		0	
180:											
Odonnell-----	0-1	---		20-30		6.1-7.3		0		0	
	1-5	15-30		---		5.6-7.3		0		0	
	5-16	10-24		---		5.6-7.3		0		0	
	16-25	10-20		---		5.6-6.5		0		0	
	25-44	10-20		---		5.6-6.5		0		0	
	44-64	10-20		---		4.8-6.5		0		0	
Grandad-----											
	0-1	---		20-30		4.5-5.5		0		0	
	1-3	15-25		---		5.3-6.6		0		0	
	3-19	15-25		---		5.5-6.6		0		0	
	19-30	10-15		---		4.9-6.2		0		0	
	30-39	6-15		---		4.5-6.5		0		0	
	39-45	7-15		---		4.7-5.9		0		0	
	45-58	2-10		---		4.8-6.4		0		0	
	58-64	2-10		---		4.8-6.4		0		0	
181:											
Odonnell-----	0-2	---		20-30		6.1-7.3		0		0	
	2-3	---		20-30		6.1-7.3		0		0	
	3-7	15-30		---		6.6-7.3		0		0	
	7-17	10-24		---		6.6-7.3		0		0	
	17-25	10-20		---		6.1-6.5		0		0	
	25-53	10-20		---		5.1-6.5		0		0	
	53-63	---		5-15		4.5-5.5		0		0	
182:											
Oxyaquic Xerofluvents, occasionally flooded-----	0-6	5-14		---		5.5-5.7		0		0	
	6-17	1-7		---		5.5-7.1		0		0	
	17-18	2-4		---		5.5-5.7		0		0	
	18-39	---		---		5.5-5.9		0		0	
	39-41	2-4		---		5.7-6.0		0		0	
	41-60	---		---		5.7-6.3		0		0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sal-
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
182: Itzee-----	0-1 1-4 4-12 12-47 47-60	--- 4-9 1-7 3-13 1-6	20-30 --- --- --- ---	6.1-7.3 5.9-7.3 6.0-7.3 6.4-6.6 5.6-6.6	0 0 0 0 0	0 0 0 0 0	
183: Pits, quarry-----	0-60	---	---	---	---	---	
184: Placer-----	0-2 2-5 5-10 10-31 31-52 52-62	--- 10-15 10-15 14-20 13-20 ---	20-30 --- --- --- 10-15 ---	4.5-5.5 6.1-7.3 6.3-6.6 4.5-6.5 4.5-6.0 ---	0 0 0 0 0 ---	0 0 0 0 0 ---	
Dowper-----	0-2 2-4 4-6 6-21 21-58 58-65 65-75	--- --- 15-25 15-25 13-20 6-15 ---	20-30 20-30 --- --- --- --- ---	6.1-7.3 6.1-7.3 5.6-6.5 5.6-6.5 5.6-6.0 5.6-6.0 ---	0 0 0 0 0 0 ---	0 0 0 0 0 0 ---	
Grangemont-----	0-2 2-3 3-7 7-14 14-38 38-95	--- --- 15-25 15-25 12-20 15-20	20-30 20-30 --- --- 9-15 11-15	4.5-5.5 4.5-5.5 5.6-6.8 5.1-6.5 4.6-6.3 4.8-6.6	0 0 0 0 0 0	0 0 0 0 0 0	
185: Poorman, dry-----	0-1 1-3 3-13 13-29 29-36 36-52 52-61	--- 15-20 15-20 10-20 --- --- ---	20-30 --- --- --- 7-10 7-10 5-7	4.5-5.5 5.6-6.8 5.6-7.3 4.7-6.1 4.5-6.0 4.5-6.0 4.5-6.0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil	Calcium	Gypsum	Sa
		exchange	capacity	cation-	exchange				
		capacity		exchange	capacity	reaction	carbonate		
	In	meq/100 g	meq/100 g	pH	Pct	Pct			mm
186: Poorman, dry	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-20	---	5.6-6.8	0	0			
	3-13	15-20	---	5.6-7.3	0	0			
	13-29	10-20	---	4.7-6.1	0	0			
	29-36	---	7-10	4.5-6.0	0	0			
	36-52	---	7-10	4.5-6.0	0	0			
Poorman	52-61	---	5-7	4.5-6.0	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-20	---	5.6-6.8	0	0			
	3-13	15-20	---	5.6-7.3	0	0			
	13-29	10-20	---	4.7-6.1	0	0			
	29-36	---	7-10	4.5-6.0	0	0			
187: Poorman	36-52	---	7-10	4.5-6.0	0	0			
	52-61	---	5-7	4.5-6.0	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-20	---	5.6-6.8	0	0			
	3-13	15-20	---	5.6-7.3	0	0			
	13-29	10-20	---	4.7-6.1	0	0			
Grandad	29-36	---	7-10	4.5-6.0	0	0			
	36-52	---	7-10	4.5-6.0	0	0			
	52-61	---	5-7	4.5-6.0	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
	1-3	15-25	---	5.3-6.6	0	0			
	3-19	15-25	---	5.5-6.6	0	0			
188: Poorman	19-30	10-15	---	4.9-6.2	0	0			
	30-39	6-15	---	4.5-6.5	0	0			
	39-45	7-15	---	4.7-5.9	0	0			
	45-58	2-10	---	4.8-6.4	0	0			
	58-64	2-10	---	4.8-6.4	0	0			
	0-1	---	20-30	4.5-5.5	0	0			
Poorman	1-3	15-20	---	5.6-6.8	0	0			
	3-13	15-20	---	5.6-7.3	0	0			
	13-29	10-20	---	4.7-6.1	0	0			
	29-36	---	7-10	4.5-6.0	0	0			
	36-52	---	7-10	4.5-6.0	0	0			
	52-61	---	5-7	4.5-6.0	0	0			

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g	meq/100 g	pH	Pct	Pct	mm				
188:	In										
Grandad-----	0-1	---	20-30	4.5-5.5	0	0					
	1-3	15-25	---	5.3-6.6	0	0					
	3-19	15-25	---	5.5-6.6	0	0					
	19-30	10-15	---	4.9-6.2	0	0					
	30-39	6-15	---	4.5-6.5	0	0					
	39-45	7-15	---	4.7-5.9	0	0					
	45-58	2-10	---	4.8-6.4	0	0					
	58-64	2-10	---	4.8-6.4	0	0					
189:											
Poorman-----	0-1	---	20-30	4.5-5.5	0	0					
	1-3	15-20	---	5.6-6.8	0	0					
	3-13	15-20	---	5.6-7.3	0	0					
	13-29	10-20	---	4.7-6.1	0	0					
	29-36	---	7-10	4.5-6.0	0	0					
	36-52	---	7-10	4.5-6.0	0	0					
	52-61	---	5-7	4.5-6.0	0	0					
Grandad, dry-----	0-1	---	20-30	4.5-5.5	0	0					
	1-3	15-25	---	5.3-6.6	0	0					
	3-19	15-25	---	5.5-6.6	0	0					
	19-30	10-15	---	4.9-6.2	0	0					
	30-39	6-15	---	4.5-6.5	0	0					
	39-45	7-15	---	4.7-5.9	0	0					
	45-58	2-10	---	4.8-6.4	0	0					
	58-64	2-10	---	4.8-6.4	0	0					
190:											
Poorman-----	0-1	---	20-30	4.5-5.5	0	0					
	1-3	15-20	---	5.6-6.8	0	0					
	3-13	15-20	---	5.6-7.3	0	0					
	13-29	10-20	---	4.7-6.1	0	0					
	29-36	---	7-10	4.5-6.0	0	0					
	36-52	---	7-10	4.5-6.0	0	0					
	52-61	---	5-7	4.5-6.0	0	0					
Grandad, dry-----	0-1	---	20-30	4.5-5.5	0	0					
	1-3	15-25	---	5.3-6.6	0	0					
	3-19	15-25	---	5.5-6.6	0	0					
	19-30	10-15	---	4.9-6.2	0	0					
	30-39	6-15	---	4.5-6.5	0	0					
	39-45	7-15	---	4.7-5.9	0	0					
	45-58	2-10	---	4.8-6.4	0	0					
	58-64	2-10	---	4.8-6.4	0	0					

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g					
	In				pH	Pct	Pct	mm
191: Reggear-----	0-1	---	20-30	6.1-7.3		0	0	
	1-8	15-20	---	5.6-7.3		0	0	
	8-13	15-20	---	5.5-6.8		0	0	
	13-22	13-20	---	4.8-6.5		0	0	
	22-31	15-20	---	4.5-6.2		0	0	
	31-60	15-25	---	4.5-6.4		0	0	
	60-86	15-25	---	4.8-6.0		0	0	
Kauder-----	0-2	---	20-30	6.1-7.3		0	0	
	2-4	15-25	---	4.4-7.3		0	0	
	4-15	15-25	---	4.4-7.3		0	0	
	15-23	15-20	---	4.5-6.5		0	0	
	23-34	10-15	---	4.5-6.5		0	0	
	34-95	7-14	---	4.5-6.5		0	0	
192: Reggear-----	0-1	---	20-30	6.1-7.3		0	0	
	1-8	15-20	---	5.6-7.3		0	0	
	8-13	15-20	---	5.5-6.8		0	0	
	13-22	13-20	---	4.8-6.5		0	0	
	22-31	15-20	---	4.5-6.2		0	0	
	31-60	15-25	---	4.5-6.4		0	0	
	60-86	15-25	---	4.8-6.0		0	0	
Seddow-----	0-1	---	20-30	6.1-7.3		0	0	
	1-3	15-20	---	6.2-7.0		0	0	
	3-5	15-20	---	5.8-6.2		0	0	
	5-13	15-20	---	5.6-6.2		0	0	
	13-35	20-30	---	5.6-6.6		0	0	
	35-44	20-25	---	5.6-6.5		0	0	
	44-54	---	---	---		---	---	
193: Rettig, high elevation----	0-1	---	20-30	4.5-5.5		0	0	
	1-7	15-25	---	5.6-7.2		0	0	
	7-27	15-25	---	5.6-7.0		0	0	
	27-34	6-10	---	5.6-6.8		0	0	
	34-47	6-10	---	5.4-6.4		0	0	
	47-63	6-8	---	5.4-6.2		0	0	
	63-66	2-8	---	4.9-6.2		0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sam
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
194: Rettig-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
195: Rettig, cold-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
196: Rettig, cool-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
Rettig, dry-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
197: Rettig-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
Rettig-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
197: Grandad-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-25	---	5.3-6.6	0	0	
	3-19	15-25	---	5.5-6.6	0	0	
	19-30	10-15	---	4.9-6.2	0	0	
	30-39	6-15	---	4.5-6.5	0	0	
	39-45	7-15	---	4.7-5.9	0	0	
	45-58	2-10	---	4.8-6.4	0	0	
	58-64	2-10	---	4.8-6.4	0	0	
198: Rettig, warm, dry-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
Township-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-30	---	4.8-6.8	0	0	
	3-17	15-25	---	5.1-6.6	0	0	
	17-35	5-14	---	5.6-6.5	0	0	
	35-43	7-11	---	5.6-6.5	0	0	
	43-53	3-12	---	5.6-6.5	0	0	
	53-66	3-10	---	5.6-6.5	0	0	
199: Rettig-----	0-1	---	20-30	4.5-5.5	0	0	
	1-7	15-25	---	5.6-7.2	0	0	
	7-27	15-25	---	5.6-7.0	0	0	
	27-34	6-10	---	5.6-6.8	0	0	
	34-47	6-10	---	5.4-6.4	0	0	
	47-63	6-8	---	5.4-6.2	0	0	
	63-66	2-8	---	4.9-6.2	0	0	
Township, wet-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-30	---	4.8-6.8	0	0	
	3-17	15-25	---	5.1-6.6	0	0	
	17-35	5-14	---	5.6-6.5	0	0	
	35-43	7-11	---	5.6-6.5	0	0	
	43-53	3-12	---	5.6-6.5	0	0	
	53-66	3-10	---	5.6-6.5	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
199: Stepoff-----	0-3	---	20-30	6.1-7.3	0	0	
	3-8	15-25	---	3.8-5.0	0	0	
	8-24	15-25	---	4.1-5.3	0	0	
	24-38	11-15	---	4.5-5.3	0	0	
	38-46	4-11	---	4.5-5.3	0	0	
	46-63	4-9	---	4.8-5.1	0	0	
200: Riswold-----	0-1	---	20-30	4.5-5.5	0	0	
	1-9	14-25	---	5.9-7.3	0	0	
	9-17	13-20	---	5.6-7.3	0	0	
	17-27	15-25	---	5.2-6.5	0	0	
	27-44	15-25	---	5.0-6.5	0	0	
	44-60	18-24	---	5.6-7.3	0	0	
	60-72	20-28	---	5.9-7.3	0	0	
Cranberry-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-5	15-25	---	5.6-6.5	0	0	
	5-11	15-25	---	6.1-6.5	0	0	
	11-16	10-20	---	5.6-6.5	0	0	
	16-22	10-25	---	5.1-6.5	0	0	
	22-32	10-20	---	5.6-6.5	0	0	
	32-40	15-25	---	4.5-6.5	0	0	
	40-50	15-25	---	4.5-6.5	0	0	
	50-57	20-30	---	4.5-6.5	0	0	
	57-62	20-25	---	4.5-6.5	0	0	
201: Riswold-----	0-1	---	20-30	4.5-5.5	0	0	
	1-9	14-25	---	5.9-7.3	0	0	
	9-17	13-20	---	5.6-7.3	0	0	
	17-27	15-25	---	5.2-6.5	0	0	
	27-44	15-25	---	5.0-6.5	0	0	
	44-60	18-24	---	5.6-7.3	0	0	
	60-72	20-28	---	5.9-7.3	0	0	
Grangemont-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-7	15-25	---	5.6-6.8	0	0	
	7-14	15-25	---	5.1-6.5	0	0	
	14-38	12-20	9-15	4.6-6.3	0	0	
	38-95	15-20	11-15	4.8-6.6	0	0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction		Calcium carbonate		Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pH	Pct	Pct		
202:	In										
Rock outcrop-----	0-60	---	---	---	---	---	---	---	---	---	---
Whiskeycreek-----	0-4	9-14	---	---	---	5.6-7.3	5.6-7.3	0	0	0	0
	4-9	3-8	---	---	---	5.6-7.3	5.6-7.3	0	0	0	0
	9-15	1-4	---	---	---	6.0-7.3	6.0-7.3	0	0	0	0
	15-25	---	---	---	---	---	---	---	---	---	---
Texascreek, dry-----	0-1	---	20-30	20-30	20-30	6.1-7.3	6.1-7.3	0	0	0	0
	1-13	12-15	---	---	---	5.8-6.9	5.8-6.9	0	0	0	0
	13-25	10-15	---	---	---	5.8-6.8	5.8-6.8	0	0	0	0
	25-33	7-14	---	---	---	5.8-6.8	5.8-6.8	0	0	0	0
	33-43	---	---	---	---	---	---	---	---	---	---
203:											
Scaler-----	0-1	---	20-30	20-30	20-30	4.5-5.5	4.5-5.5	0	0	0	0
	1-2	15-25	---	---	---	5.1-7.3	5.1-7.3	0	0	0	0
	2-11	15-25	---	---	---	5.4-6.8	5.4-6.8	0	0	0	0
	11-18	9-12	---	---	---	5.0-6.5	5.0-6.5	0	0	0	0
	18-30	7-13	---	---	---	5.1-6.5	5.1-6.5	0	0	0	0
	30-40	10-20	7-15	7-15	7-15	4.5-6.0	4.5-6.0	0	0	0	0
	40-48	11-25	8-19	8-19	8-19	4.5-6.0	4.5-6.0	0	0	0	0
	48-65	4-11	2-8	2-8	2-8	4.6-5.6	4.6-5.6	0	0	0	0
204:											
Scaler-----	0-1	---	20-30	20-30	20-30	4.5-5.5	4.5-5.5	0	0	0	0
	1-2	15-25	---	---	---	5.1-7.3	5.1-7.3	0	0	0	0
	2-11	15-25	---	---	---	5.4-6.8	5.4-6.8	0	0	0	0
	11-18	9-12	---	---	---	5.0-6.5	5.0-6.5	0	0	0	0
	18-30	7-13	---	---	---	5.1-6.5	5.1-6.5	0	0	0	0
	30-40	10-20	7-15	7-15	7-15	4.5-6.0	4.5-6.0	0	0	0	0
	40-48	11-25	8-19	8-19	8-19	4.5-6.0	4.5-6.0	0	0	0	0
	48-65	4-11	2-8	2-8	2-8	4.6-5.6	4.6-5.6	0	0	0	0
Grandad-----	0-1	---	20-30	20-30	20-30	4.5-5.5	4.5-5.5	0	0	0	0
	1-3	15-25	---	---	---	5.3-6.6	5.3-6.6	0	0	0	0
	3-19	15-25	---	---	---	5.5-6.6	5.5-6.6	0	0	0	0
	19-30	10-15	---	---	---	4.9-6.2	4.9-6.2	0	0	0	0
	30-39	6-15	---	---	---	4.5-6.5	4.5-6.5	0	0	0	0
	39-45	7-15	---	---	---	4.7-5.9	4.7-5.9	0	0	0	0
	45-58	2-10	---	---	---	4.8-6.4	4.8-6.4	0	0	0	0
	58-64	2-10	---	---	---	4.8-6.4	4.8-6.4	0	0	0	0

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
205: Scaler-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	15-25	---	5.1-7.3	0	0	
	2-11	15-25	---	5.4-6.8	0	0	
	11-18	9-12	---	5.0-6.5	0	0	
	18-30	7-13	---	5.1-6.5	0	0	
	30-40	10-20	7-15	4.5-6.0	0	0	
	40-48	11-25	8-19	4.5-6.0	0	0	
	48-65	4-11	2-8	4.6-5.6	0	0	
Grangemont-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-7	15-25	---	5.6-6.8	0	0	
	7-14	15-25	---	5.1-6.5	0	0	
	14-38	12-20	9-15	4.6-6.3	0	0	
	38-95	15-20	11-15	4.8-6.6	0	0	
206: Scand-----	0-1	---	20-30	4.5-5.5	0	0	
	1-4	15-25	---	5.5-6.5	0	0	
	4-16	15-25	---	5.6-6.5	0	0	
	16-27	8-12	6-9	4.5-6.0	0	0	
	27-53	9-13	7-10	5.0-5.5	0	0	
	53-63	---	5-12	5.1-5.5	0	0	
Scaler-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	15-25	---	5.1-7.3	0	0	
	2-11	15-25	---	5.4-6.8	0	0	
	11-18	9-12	---	5.0-6.5	0	0	
	18-30	7-13	---	5.1-6.5	0	0	
	30-40	10-20	7-15	4.5-6.0	0	0	
	40-48	11-25	8-19	4.5-6.0	0	0	
	48-65	4-11	2-8	4.6-5.6	0	0	
207: Seddow-----	0-1	---	20-30	6.1-7.3	0	0	
	1-3	15-20	---	6.2-7.0	0	0	
	3-5	15-20	---	5.8-6.2	0	0	
	5-13	15-20	---	5.6-6.2	0	0	
	13-35	20-30	---	5.6-6.6	0	0	
	35-44	20-25	---	5.6-6.5	0	0	
	44-54	---	---	---	---	---	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction		Calcium carbonate		Gypsum	Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pH	Pct	Pct		
208: Sedgewood	In										
	0-1	---	---	20-30	---	6.1-7.3	---	0	---	0	---
	1-3	15-20	---	---	---	6.2-7.0	---	0	---	0	---
	3-5	15-20	---	---	---	5.8-6.2	---	0	---	0	---
	5-13	15-20	---	---	---	5.6-6.2	---	0	---	0	---
	13-35	20-30	---	---	---	5.6-6.6	---	0	---	0	---
209: Sedgewood	35-44	20-25	---	---	---	5.6-6.5	---	0	---	0	---
	44-54	---	---	---	---	---	---	---	---	---	---
	0-1	---	---	20-30	---	6.1-7.3	---	0	---	0	---
	1-3	15-20	---	---	---	6.2-7.0	---	0	---	0	---
	3-5	15-20	---	---	---	5.8-6.2	---	0	---	0	---
	5-13	15-20	---	---	---	5.6-6.2	---	0	---	0	---
210: Setters	13-35	20-30	---	---	---	5.6-6.6	---	0	---	0	---
	35-44	20-25	---	---	---	5.6-6.5	---	0	---	0	---
	44-54	---	---	---	---	---	---	---	---	---	---
	0-2	---	---	20-30	---	4.5-5.5	---	0	---	0	---
	2-15	15-30	---	---	---	6.2-6.8	---	0	---	0	---
	15-28	15-30	---	---	---	6.0-6.7	---	0	---	0	---
211: Shattuck	28-34	15-40	---	---	---	5.7-6.1	---	0	---	0	---
	34-62	20-40	---	---	---	5.3-6.5	---	0	---	0	---
	0-2	---	---	20-30	---	4.5-5.5	---	0	---	0	---
	2-7	14-32	---	---	---	5.5-6.5	---	0	---	0	---
	7-19	9-20	---	---	---	5.5-6.4	---	0	---	0	---
	19-30	6-17	---	---	---	4.5-5.9	---	0	---	0	---
212: Shattuck	30-63	11-20	---	---	---	4.5-5.9	---	0	---	0	---
	0-2	---	---	20-30	---	4.5-5.5	---	0	---	0	---
	2-7	14-32	---	---	---	5.5-6.5	---	0	---	0	---
	7-19	9-20	---	---	---	5.5-6.4	---	0	---	0	---
	19-30	6-17	---	---	---	4.5-5.9	---	0	---	0	---
	30-63	11-20	---	---	---	4.5-5.9	---	0	---	0	---
213: Shattuck, moist	0-2	---	---	20-30	---	4.5-5.5	---	0	---	0	---
	2-7	14-32	---	---	---	5.5-6.5	---	0	---	0	---
	7-19	9-20	---	---	---	5.5-6.4	---	0	---	0	---
	19-30	6-17	---	---	---	4.5-5.9	---	0	---	0	---
	30-63	11-20	---	---	---	4.5-5.9	---	0	---	0	---
	0-2	---	---	20-30	---	4.5-5.5	---	0	---	0	---

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
214: Shattuck, moist-----	0-2	---	20-30	4.5-5.5	0	0	
	2-7	14-32	---	5.5-6.5	0	0	
	7-19	9-20	---	5.5-6.4	0	0	
	19-30	6-17	---	4.5-5.9	0	0	
	30-63	11-20	---	4.5-5.9	0	0	
Dworshak, moist-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-11	20-25	---	5.8-7.1	0	0	
	11-18	20-25	---	6.4-7.0	0	0	
	18-31	20-25	---	5.2-6.8	0	0	
	31-63	12-22	20-25	4.8-6.4	0	0	
215: Shattuck-----	0-2	---	20-30	4.5-5.5	0	0	
	2-7	14-32	---	5.5-6.5	0	0	
	7-19	9-20	---	5.5-6.4	0	0	
	19-30	6-17	---	4.5-5.9	0	0	
	30-63	11-20	---	4.5-5.9	0	0	
Dworshak-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	---	20-30	4.5-5.5	0	0	
	3-11	20-25	---	5.8-7.1	0	0	
	11-18	20-25	---	6.4-7.0	0	0	
	18-31	20-25	---	5.2-6.8	0	0	
	31-63	12-22	20-25	4.8-6.4	0	0	
216: Sly-----	0-4	---	20-30	6.1-7.3	0	0	
	4-8	4-12	---	5.6-6.8	0	0	
	8-19	4-15	---	4.4-6.8	0	0	
	19-28	11-17	---	4.2-6.8	0	0	
	28-37	17-20	---	4.2-6.1	0	0	
	37-66	10-18	---	6.0-6.2	0	0	
Wilkins-----	0-15	20-30	---	5.6-7.3	0	0	
	15-20	10-15	---	5.6-7.3	0	0	
	20-52	30-40	---	6.1-7.3	0	0	
	52-64	25-35	---	6.6-7.3	0	0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity		Effective cation- exchange capacity		Soil reaction		Calcium carbonate		Gypsum		Sa
		meq/100 g	meq/100 g	meq/100 g	meq/100 g	pH	pH	Pct	Pct	Pct	Pct	
217: Southwick-----	In											
	0-1	---		20-30		6.1-7.3		0		0		
	1-17	13-22		---		5.6-7.3		0		0		
	17-26	9-19		---		5.6-7.3		0		0		
	26-61	18-28		---		5.6-7.3		0		0		
218: Southwick-----	0-9	16-24		---		5.6-7.3		0		0		
	9-26	15-22		---		5.6-6.5		0		0		
	26-32	9-16		---		5.6-7.3		0		0		
	32-46	18-23		---		5.6-6.5		0		0		
	46-64	20-25		---		5.6-7.3		0		0		
Larkin-----	0-19	14-22		---		5.6-7.3		0		0		
	19-61	14-27		---		5.6-7.3		0		0		
219: Statemeadow-----	0-1	---		20-30		4.5-5.5		0		0		
	1-2	14-20		---		5.0-6.0		0		0		
	2-9	14-20		---		5.6-6.9		0		0		
	9-51	13-20		---		5.5-6.0		0		0		
	51-61	13-15		---		4.9-6.5		0		0		
Reggear-----	0-1	---		20-30		6.1-7.3		0		0		
	1-8	15-20		---		5.6-7.3		0		0		
	8-13	15-20		---		5.5-6.8		0		0		
	13-22	13-20		---		4.8-6.5		0		0		
	22-31	15-20		---		4.5-6.2		0		0		
	31-60	15-25		---		4.5-6.4		0		0		
	60-86	15-25		---		4.8-6.0		0		0		
220: Swayne-----	0-1	---		20-30		6.1-7.3		0		0		
	1-8	15-20		---		6.1-7.3		0		0		
	8-14	15-20		---		5.9-7.0		0		0		
	14-22	15-20		---		6.0-6.5		0		0		
	22-56	20-25		---		5.6-7.3		0		0		
	56-61	20-25		---		5.5-7.3		0		0		
221: Taney-----	0-10	20-25		---		5.8-7.0		0		0		
	10-31	11-20		---		5.5-6.2		0		0		
	31-60	20-30		---		5.6-6.2		0		0		

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
222: Taney-----	0-14 14-23 23-29 29-36 36-63	17-24 14-22 8-16 16-23 20-35	--- --- --- --- ---	5.1-6.5 5.6-6.5 5.6-6.5 5.6-6.5 5.6-7.3	0 0 0 0 0	0 0 0 0 0	
Joel-----	0-18 18-24 24-60	17-24 15-21 17-25	--- --- ---	5.6-7.3 5.6-7.3 5.6-7.3	0 0 0	0 0 0	
223: Taney-----	0-10 10-31 31-60	20-25 11-20 20-30	--- --- ---	5.8-7.0 5.5-6.2 5.6-6.2	0 0 0	0 0 0	
McCrosket-----	0-2 2-15 15-35 35-48 48-58	--- 15-20 6-10 6-10 ---	20-30 --- --- 4-7 ---	6.1-7.3 5.6-6.6 4.6-6.2 4.5-6.0 ---	0 0 0 0 ---	0 0 0 0 ---	
224: Taney-----	0-10 10-31 31-60	20-25 11-20 20-30	--- --- ---	5.8-7.0 5.5-6.2 5.6-6.2	0 0 0	0 0 0	
Setters-----	0-2 2-15 15-28 28-34 34-62	--- 15-30 15-30 15-40 20-40	20-30 --- --- --- ---	4.5-5.5 6.2-6.8 6.0-6.7 5.7-6.1 5.3-6.5	0 0 0 0 0	0 0 0 0 0	
225: Taney-----	0-10 10-31 31-60	20-25 11-20 20-30	--- --- ---	5.8-7.0 5.5-6.2 5.6-6.2	0 0 0	0 0 0	
Setters-----	0-2 2-15 15-28 28-34 34-62	--- 15-30 15-30 15-40 20-40	20-30 --- --- --- ---	4.5-5.5 6.2-6.8 6.0-6.7 5.7-6.1 5.3-6.5	0 0 0 0 0	0 0 0 0 0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
		meq/100 g	meq/100 g					
	In				pH	Pct	Pct	mm
226: Teakean-----	0-1	---	20-30	4.5-5.5		0	0	
	1-13	15-20	---	5.1-6.8		0	0	
	13-23	20-25	---	4.9-6.5		0	0	
	23-42	20-25	---	4.6-6.4		0	0	
	42-61	20-25	---	4.9-6.0		0	0	
227: Teneb-----	0-7	20-25	---	5.1-6.5		0	0	
	7-24	---	20-30	4.5-6.0		0	0	
	24-34	15-25	---	4.5-6.5		0	0	
	34-64	10-30	---	4.5-6.5		0	0	
228: Texascreek-----	0-1	---	20-30	6.1-7.3		0	0	
	1-13	12-15	---	5.8-6.9		0	0	
	13-25	10-15	---	5.8-6.8		0	0	
	25-33	7-14	---	5.8-6.8		0	0	
	33-43	---	---	---		---	---	
Rock outcrop-----	0-60	---	---	---		---	---	
229: Texascreek, dry-----	0-1	---	20-30	6.1-7.3		0	0	
	1-13	12-15	---	5.8-6.9		0	0	
	13-25	10-15	---	5.8-6.8		0	0	
	25-33	7-14	---	5.8-6.8		0	0	
	33-43	---	---	---		---	---	
Whiskeycreek-----	0-4	9-14	---	5.6-7.3		0	0	
	4-9	3-8	---	5.6-7.3		0	0	
	9-15	1-4	---	6.0-7.3		0	0	
	15-25	---	---	---		---	---	
230: Norwidge-----	0-3	---	20-30	4.5-5.5		0	0	
	3-6	---	5-6	4.7-6.3		0	0	
	6-17	15-20	---	4.8-6.4		0	0	
	17-26	10-15	---	5.2-6.0		0	0	
	26-42	15-20	11-15	4.6-5.4		0	0	
	42-81	15-25	---	4.7-5.9		0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
230: Threesebear-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-20	---	5.6-6.4	0	0	
	3-18	15-20	---	5.6-6.4	0	0	
	18-26	---	10-15	5.3-6.3	0	0	
	26-40	---	12-15	4.4-5.6	0	0	
	40-69	---	13-20	4.3-5.4	0	0	
231: Tomodo-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	15-20	---	4.8-7.3	0	0	
	3-20	15-20	---	5.4-7.3	0	0	
	20-30	8-14	---	4.6-6.0	0	0	
	30-51	---	11-15	4.6-5.5	0	0	
	51-62	---	13-15	4.6-5.5	0	0	
	62-66	---	12-15	4.4-5.7	0	0	
232: Tomodo-----	0-2	---	20-30	4.5-5.5	0	0	
	2-3	15-20	---	4.8-7.3	0	0	
	3-20	15-20	---	5.4-7.3	0	0	
	20-30	8-14	---	4.6-6.0	0	0	
	30-51	---	11-15	4.6-5.5	0	0	
	51-62	---	13-15	4.6-5.5	0	0	
	62-66	---	12-15	4.4-5.7	0	0	
Lado-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-4	15-25	---	5.5-7.1	0	0	
	4-20	15-25	---	5.1-7.0	0	0	
	20-48	15-20	---	4.8-6.7	0	0	
	48-64	10-15	---	4.8-6.4	0	0	
233: Township-----	0-1	---	20-30	4.5-5.5	0	0	
	1-3	15-30	---	4.8-6.8	0	0	
	3-17	15-25	---	5.1-6.6	0	0	
	17-35	5-14	---	5.6-6.5	0	0	
	35-43	7-11	---	5.6-6.5	0	0	
	43-53	3-12	---	5.6-6.5	0	0	
	53-66	3-10	---	5.6-6.5	0	0	



Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity	
		meq/100 g		meq/100 g		pH		Pct		
233:	In							Pct		mm
Rettig-----	0-1	---		20-30		4.5-5.5		0		0
	1-7	15-25		---		5.6-7.2		0		0
	7-27	15-25		---		5.6-7.0		0		0
	27-34	6-10		---		5.6-6.8		0		0
	34-47	6-10		---		5.4-6.4		0		0
	47-63	6-8		---		5.4-6.2		0		0
	63-66	2-8		---		4.9-6.2		0		0
234:										
Township-----	0-1	---		20-30		4.5-5.5		0		0
	1-3	15-30		---		4.8-6.8		0		0
	3-17	15-25		---		5.1-6.6		0		0
	17-35	5-14		---		5.6-6.5		0		0
	35-43	7-11		---		5.6-6.5		0		0
	43-53	3-12		---		5.6-6.5		0		0
	53-66	3-10		---		5.6-6.5		0		0
Rettig-----	0-1	---		20-30		4.5-5.5		0		0
	1-7	15-25		---		5.6-7.2		0		0
	7-27	15-25		---		5.6-7.0		0		0
	27-34	6-10		---		5.6-6.8		0		0
	34-47	6-10		---		5.4-6.4		0		0
	47-63	6-8		---		5.4-6.2		0		0
	63-66	2-8		---		4.9-6.2		0		0
235:										
Township, dry-----	0-1	---		20-30		4.5-5.5		0		0
	1-3	15-30		---		4.8-6.8		0		0
	3-17	15-25		---		5.1-6.6		0		0
	17-35	5-14		---		5.6-6.5		0		0
	35-43	7-11		---		5.6-6.5		0		0
	43-53	3-12		---		5.6-6.5		0		0
	53-66	3-10		---		5.6-6.5		0		0
Rettig, low precipitation	0-1	---		20-30		4.5-5.5		0		0
	1-7	15-25		---		5.6-7.2		0		0
	7-27	15-25		---		5.6-7.0		0		0
	27-34	6-10		---		5.6-6.8		0		0
	34-47	6-10		---		5.4-6.4		0		0
	47-63	6-8		---		5.4-6.2		0		0
	63-66	2-8		---		4.9-6.2		0		0

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation-		Effective		Soil		Calcium		Gypsum	Sa
		exchange	capacity	cation-	exchange	reaction	carbonate	exchange	capacity		
		meq/100 g		meq/100 g		pH		Pct		Pct	mm
235:	In										
Nakarna, dry-----	0-1	---		20-30		4.5-5.5		0		0	
	1-5	15-30		---		5.8-7.3		0		0	
	5-15	10-24		---		6.0-7.3		0		0	
	15-34	3-15		---		5.1-7.3		0		0	
	34-42	1-10		---		4.9-6.0		0		0	
	42-52	---		---		---		---		---	
236:											
Trappercreek-----	0-4	---		20-30		6.1-7.3		0		0	
	4-8	15-25		---		5.1-6.5		0		0	
	8-19	15-25		---		5.1-6.5		0		0	
	19-32	20-25		---		5.1-6.0		0		0	
	32-46	15-20		---		4.8-6.0		0		0	
	46-60	15-20		---		4.7-6.0		0		0	
	60-79	8-12		---		5.1-5.5		0		0	
	79-85	2-12		---		4.5-5.0		0		0	
Narnett-----	0-9	15-25		---		5.3-6.8		0		0	
	9-15	10-20		---		5.2-6.6		0		0	
	15-50	15-20		---		4.9-6.6		0		0	
	50-58	10-20		---		5.0-6.2		0		0	
	58-80	5-20		10-20		4.5-6.2		0		0	
237:											
Uvi-----	0-1	---		20-30		4.5-5.5		0		0	
	1-8	15-25		11-16		5.0-7.2		0		0	
	8-44	15-20		---		4.9-6.6		0		0	
	44-61	3-12		---		4.9-6.6		0		0	
238:											
Uvi-----	0-4	16-22		---		6.1-7.3		0		0	
	4-55	8-14		---		5.6-6.5		0		0	
	55-65	2-9		---		5.6-6.5		0		0	

Table 28.—Chemical Properties—Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Sa
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
239: Vaywood, high precipitation-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	15-25	---	5.0-6.2	0	0	
	7-15	15-25	---	5.2-6.2	0	0	
	15-20	15-25	---	5.2-6.2	0	0	
	20-25	7-10	---	5.2-5.6	0	0	
	25-38	7-10	---	5.2-5.6	0	0	
	38-47	5-8	---	4.7-5.4	0	0	
	47-62	4-6	---	4.8-5.4	0	0	
Vaywood, dry-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	15-25	---	5.0-6.2	0	0	
	7-15	15-25	---	5.2-6.2	0	0	
	15-20	15-25	---	5.2-6.2	0	0	
	20-25	7-10	---	5.2-5.6	0	0	
	25-38	7-10	---	5.2-5.6	0	0	
	38-47	5-8	---	4.7-5.4	0	0	
	47-62	4-6	---	4.8-5.4	0	0	
240: Vaywood-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	15-25	---	5.0-6.2	0	0	
	7-15	15-25	---	5.2-6.2	0	0	
	15-20	15-25	---	5.2-6.2	0	0	
	20-25	7-10	---	5.2-5.6	0	0	
	25-38	7-10	---	5.2-5.6	0	0	
	38-47	5-8	---	4.7-5.4	0	0	
	47-62	4-6	---	4.8-5.4	0	0	
241: Vaywood-----	0-1	---	20-30	4.5-5.5	0	0	
	1-2	---	20-30	4.5-5.5	0	0	
	2-7	15-25	---	5.0-6.2	0	0	
	7-15	15-25	---	5.2-6.2	0	0	
	15-20	15-25	---	5.2-6.2	0	0	
	20-25	7-10	---	5.2-5.6	0	0	
	25-38	7-10	---	5.2-5.6	0	0	
	38-47	5-8	---	4.7-5.4	0	0	
	47-62	4-6	---	4.8-5.4	0	0	

Table 28.--Chemical Properties--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity
	In	meq/100 g	meq/100 g	pH	Pct	Pct	mm
241: Handoff-----	0-2	---	20-30	6.1-7.3	0	0	
	2-11	15-25	---	5.1-6.0	0	0	
	11-22	15-25	---	5.1-6.0	0	0	
	22-30	---	11-13	4.5-6.0	0	0	
	30-45	---	10-12	4.5-6.0	0	0	
	45-54	---	6-8	4.5-5.5	0	0	
	54-64	---	4-6	4.5-5.5	0	0	
242: Water-----	---	---	---	---	---	---	
243: Wellsbench-----	0-6	20-25	---	6.1-7.3	0	0	
	6-14	25-30	---	5.6-7.3	0	0	
	14-41	25-35	---	5.6-7.3	0	0	
	41-51	---	---	---	---	---	
244: Wellsbench-----	0-6	20-25	---	6.1-7.3	0	0	
	6-14	25-30	---	5.6-7.3	0	0	
	14-41	25-35	---	5.6-7.3	0	0	
	41-51	---	---	---	---	---	
Lacy-----	0-1	---	20-30	6.1-7.3	0	0	
	1-3	14-20	---	6.3-7.0	0	0	
	3-13	18-29	---	6.4-6.6	0	0	
	13-16	23-28	---	6.1-7.3	0	0	
	16-26	---	---	---	---	---	
245: Wilkins-----	0-15	20-30	---	5.6-7.3	0	0	
	15-20	10-15	---	5.6-7.3	0	0	
	20-52	30-40	---	6.1-7.3	0	0	
	52-64	25-35	---	6.6-7.3	0	0	

Table 29.—Water Features

(See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply rather than to individual months. Absence of an entry indicates that the feature is not a concern or that estimated. In the "Water table" column, more than one value given for a month for the upper and lower limit the soil has both a perched and an apparent water table.)

	Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
1:	Agatha, very rocky-----	B	Jan-Dec	---	---	---	---	None	
	Rock outcrop-----	---	---	---	---	---	---	---	
2:	Agatha-----	B	Jan-Dec	---	---	---	---	None	
3:	Agatha-----	B	Jan-Dec	---	---	---	---	None	
4:	Ahsahka-----	C	Jan-Dec	---	---	---	---	None	
	Fordcreek-----	B	Jan-Dec	---	---	---	---	None	
5:	Ahsahka-----	C	Jan-Dec	---	---	---	---	None	
	Whiskeycreek-----	D	Jan-Dec	---	---	---	---	None	
6:	Aldermand-----	B	Jan-Dec	---	---	---	---	None	
7:	Aldermand-----	B	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding	
			Upper limit	Lower limit	Surface water depth	Duration Frequency
8: Aldermand, dry-----	B		In	In	In	
		Jan-Dec	---	---	---	None
9: Aquandic Cryaquepts-----	B/D					
		January	10-27	60	---	None
		February	5-25	60	---	None
		March	1-24	60	---	None
		April	8-25	60	---	None
		May	5-30	60	---	None
		June	10-30	60	---	None
		July	14-60	60	---	None
		August	16-46	60	---	None
		September	31-46	60	---	None
		October	15-41	60	---	None
		November	14-47	60	---	None
		December	0-40	60	---	None
10: Aquandic Endoaquepts-----	C/D					
		January	10-27	60	---	None
		February	5-25	60	---	None
		March	1-24	60	---	None
		April	8-25	60	---	None
		May	5-30	60	---	None
		June	13-30	60	---	None
		July	22-60	60	---	None
		August	21-60	60	---	None
		September	22-60	60	---	None
		October	21-41	60	---	None
		November	14-60	60	---	None
		December	0-40	60	---	None

Table 29.—Water Features—Continued

	Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
10:	Aquandic Dystrudepts-----	C/D		In	In	In			
			January	7-40	60	---	---	None	B
			February	7-19	60	---	---	None	B
			March	7-19	60	---	---	None	B
			April	10-23	60	---	---	None	B
			May	10-35	60	---	---	None	B
			June	14-60	60	---	---	None	B
			July	19-60	60	---	---	None	B
			August	39-60	60	---	---	None	B
			September	50-60	60	---	---	None	B
			October	29-60	60	---	---	None	B
			November	14-60	60	---	---	None	B
			December	10-60	60	---	---	None	B
11:	Bandmill, dry-----	B	Jan-Dec	---	---	---	---	None	
Grangemont-----		B	Jan-Dec	---	---	---	---	None	
Bargamin-----		C	Jan-Dec	---	---	---	---	None	
12:	Bandmill-----	B	Jan-Dec	---	---	---	---	None	
Riswold-----		C	Jan-Dec	---	---	---	---	None	
13:	Berthahill, moist-----	B	Jan-Dec	---	---	---	---	None	
Handoff-----		B	Jan-Dec	---	---	---	---	None	
14:	Berthahill-----	B	Jan-Dec	---	---	---	---	None	
Handoff-----		B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
15: Berthahill-----	B	Jan-Dec	---	---	---	---	None	
Shattuck-----	C	Jan-Dec	---	---	---	---	None	
16: Bigtalk, cool-----	B	Jan-Dec	---	---	---	---	None	
Bigtalk, wet-----	B	Jan-Dec	---	---	---	---	None	
17: Bigtalk-----	B	Jan-Dec	---	---	---	---	None	
18: Bigtalk, cool-----	B	Jan-Dec	---	---	---	---	None	
Floodwood, cool-----	C	Jan-Dec	---	---	---	---	None	
19: Bigtalk, cool-----	B	Jan-Dec	---	---	---	---	None	
Keeler, cool-----	C	Jan-Dec	---	---	---	---	None	
20: Bouldercreek, moist-----	B	Jan-Dec	---	---	---	---	None	
21: Bouldercreek-----	B	Jan-Dec	---	---	---	---	None	
22: Bouldercreek-----	B	Jan-Dec	---	---	---	---	None	



Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
23: Bouldercreek, moist-----	B	Jan-Dec	---	---	---	---	None	
Brodeer-----	B	Jan-Dec	---	---	---	---	None	
24: Bouldercreek-----	B	Jan-Dec	---	---	---	---	None	
Brodeer-----	B	Jan-Dec	---	---	---	---	None	
25: Bouldercreek-----	B	Jan-Dec	---	---	---	---	None	
Judgetown-----	B	Jan-Dec	---	---	---	---	None	
26: Bouldercreek, high precipitation-----	B	Jan-Dec	---	---	---	---	None	
Marblecreek-----	B	Jan-Dec	---	---	---	---	None	
27: Bouldercreek, cool, dry-----	B	Jan-Dec	---	---	---	---	None	
Rettig, cool-----	B	Jan-Dec	---	---	---	---	None	
28: Brequito, dry-----	B	Jan-Dec	---	---	---	---	None	
29: Brequito-----	B	Jan-Dec	---	---	---	---	None	
Grangemont-----	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
30: Brequito-----	B	Jan-Dec	---	---	---	---	None	
Lado, dry-----	B	Jan-Dec	---	---	---	---	None	
31: Brequito-----	B	Jan-Dec	---	---	---	---	None	
Lado, dry-----	B	Jan-Dec	---	---	---	---	None	
32: Brequito-----	B	Jan-Dec	---	---	---	---	None	
Mushel-----	B	Jan-Dec	---	---	---	---	None	
33: Brequito-----	B	Jan-Dec	---	---	---	---	None	
Mushel-----	B	Jan-Dec	---	---	---	---	None	
34: Brodeer, dry-----	B	Jan-Dec	---	---	---	---	None	
Brodeer-----	B	Jan-Dec	---	---	---	---	None	
35: Brodeer-----	B	Jan-Dec	---	---	---	---	None	
Mushel-----	B	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
36: Brodeer, warm	B	Jan-Dec	---	---	---	---	None	
Mushel, dry	B	Jan-Dec	---	---	---	---	None	
37: Brodeer	B	Jan-Dec	---	---	---	---	None	
Bouldercreek	B	Jan-Dec	---	---	---	---	None	
38: Brodeer	B	Jan-Dec	---	---	---	---	None	
Flewsie, dry	B	Jan-Dec	---	---	---	---	None	
39: Brodeer	B	Jan-Dec	---	---	---	---	None	
Lostpete	B	Jan-Dec	---	---	---	---	None	
40: Brodeer, moist	B	Jan-Dec	---	---	---	---	None	
Lostpete, moist	B	Jan-Dec	---	---	---	---	None	
41: Brodeer, dry	B	Jan-Dec	---	---	---	---	None	
Mushel	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding	
			Upper limit	Lower limit	Surface water depth	Duration
42: Brodeer-----	B	Jan-Dec	---	---	---	None
Mushel-----	B	Jan-Dec	---	---	---	None
43: Burntcreek-----	B/D	January February March April May June July August September October November December	7-40 7-19 7-19 10-23 10-35 14-46 19-54 39-72 50-72 29-72 14-72 10-72	>72 >72 >72 >72 >72 >72 >72 >72 >72 >72 >72 >72	---	None None None None None None None None None None None None
44: Campra-----	C	Jan-Dec	---	---	---	None
45: Campra-----	C	Jan-Dec	---	---	---	None
Sly-----	C	Jan-Dec	---	---	---	None
46: Carlinton-----	C/D	January February March April May June July November December	4-7 5-7 6-8 7-7 6-9 12-12 12-48 6-48 5-8	14-48 14-48 14-48 14-48 14-48 14-48 14-48 14-48 14-48	---	None None None None None None None None None

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
47: Carlinton----- C/D			In	In	In			
		January	4-7	14-48	---	---	None	
		February	5-7	14-48	---	---	None	
		March	6-8	14-48	---	---	None	
		April	7-7	14-48	---	---	None	
		May	6-9	14-48	---	---	None	
		June	12-12	14-48	---	---	None	
		July	12-48	14-48	---	---	None	
		November	6-48	14-48	---	---	None	
		December	5-8	14-48	---	---	None	
48: Carlinton----- C/D								
		January	4-7	14-48	---	---	None	
		February	5-7	14-48	---	---	None	
		March	6-8	14-48	---	---	None	
		April	7-7	14-48	---	---	None	
		May	6-9	14-48	---	---	None	
		June	12-12	14-48	---	---	None	
		July	12-48	14-48	---	---	None	
		November	6-48	14-48	---	---	None	
		December	5-8	14-48	---	---	None	
Kruse----- C		Jan-Dec	---	---	---	---	None	
49: Carlinton----- C/D								
		January	4-7	14-48	---	---	None	
		February	5-7	14-48	---	---	None	
		March	6-8	14-48	---	---	None	
		April	7-7	14-48	---	---	None	
		May	6-9	14-48	---	---	None	
		June	12-12	14-48	---	---	None	
		July	12-48	14-48	---	---	None	
		November	6-48	14-48	---	---	None	
		December	5-8	14-48	---	---	None	
Seddow----- B		Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
50: Caseycreek-----	C		In	In	In			
		January	15-35	60	---	---	None	
		February	15-35	60	---	---	None	
		March	15-35	60	---	---	None	
		April	15-35	60	---	---	None	
		May	15-39	60	---	---	None	
		June	24-39	60	---	---	None	
		July	31-60	60	---	---	None	
		August	39-60	60	---	---	None	
		September	45-60	60	---	---	None	
		October	33-55	60	---	---	None	
		November	26-55	60	---	---	None	
		December	15-51	60	---	---	None	
51: Cavendish-----	C	Jan-Dec	---	---	---	---	None	
52: Cavendish-----	C	Jan-Dec	---	---	---	---	None	
Taney-----	C/D	January	16-37	27-40	---	---	None	
		February	16-37	27-40	---	---	None	
		March	16-37	27-40	---	---	None	
		April	16-37	27-40	---	---	None	
		May	16-37	27-40	---	---	None	
		June	16-37	27-40	---	---	None	
		July	16-37	27-40	---	---	None	
		November	16-37	27-40	---	---	None	
		December	16-37	27-40	---	---	None	
53: Cobbler-----	B	Jan-Dec	---	---	---	---	None	
Aldermant-----	B	Jan-Dec	---	---	---	---	None	
54: Cobbler-----	B	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding	
			Upper limit	Lower limit	Surface water depth	Duration
			In	In	In	
54: Noil-----	B	Jan-Dec	---	---	---	None
55: Cranberry-----	B	Jan-Dec	---	---	---	None
Riswold-----	C	Jan-Dec	---	---	---	None
56: Crumarine-----	B/D	January February March April May June July August September October November December	6-28 6-24 6-24 6-24 6-35 14-45 22-60 39-60 49-60 30-60 14-60 10-60	60 60 60 60 60 60 60 60 60 60 60 60	---	None None None None None None None None None None None None
57: Dam-----	---	---	---	---	---	---
58: Driscoll-----	C/D	January February March April December	12-36 10-34 11-35 11-42 16-42	18-42 18-42 18-42 18-42 18-42	---	None None None None None
59: Driscoll-----	C/D	January February March April December	12-36 10-34 11-35 11-42 16-42	18-42 18-42 18-42 18-42 18-42	---	None None None None None

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
59: Larkin-----	C	Jan-Dec	---	---	---	---	None	
60: Dullaxe, high elevation-----	B	Jan-Dec	---	---	---	---	None	
Dullaxe-----	B	Jan-Dec	---	---	---	---	None	
61: Dullaxe, dry-----	B	Jan-Dec	---	---	---	---	None	
Dullaxe, wet-----	B	Jan-Dec	---	---	---	---	None	
62: Dullaxe-----	B	Jan-Dec	---	---	---	---	None	
Brodeer-----	B	Jan-Dec	---	---	---	---	None	
63: Dullaxe-----	B	Jan-Dec	---	---	---	---	None	
Brodeer-----	B	Jan-Dec	---	---	---	---	None	
64: Dullaxe-----	B	Jan-Dec	---	---	---	---	None	
Judgetown-----	B	Jan-Dec	---	---	---	---	None	
65: Dullaxe-----	B	Jan-Dec	---	---	---	---	None	
Judgetown, moist-----	B	Jan-Dec	---	---	---	---	None	



Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
66: Dullaxe-----	B	Jan-Dec	---	---	---	---	None	
Jury, moist-----	B	Jan-Dec	---	---	---	---	None	
67: Dumps, wood slash-----	---	---	---	---	---	---	---	
68: Dworshak-----	C	Jan-Dec	---	---	---	---	None	
69: Dworshak-----	C	Jan-Dec	---	---	---	---	None	
Brequito-----	B	Jan-Dec	---	---	---	---	None	
70: Elkberry-----	C	Jan-Dec	---	---	---	---	None	
Elkberry, wet-----	C	Jan-Dec	---	---	---	---	None	
71: Elkberry-----	C	Jan-Dec	---	---	---	---	None	
Dworshak-----	C	Jan-Dec	---	---	---	---	None	
72: Elkridge-----	B	Jan-Dec	---	---	---	---	None	
Riswold-----	C	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
73: Elkridge-----	B	Jan-Dec	---	---	---	---	None	
Riswold-----	C	Jan-Dec	---	---	---	---	None	
74: Fico, dry-----	B	Jan-Dec	---	---	---	---	None	
Huberit, warm-----	B	Jan-Dec	---	---	---	---	None	
75: Fico-----	B	Jan-Dec	---	---	---	---	None	
Weitas-----	B	Jan-Dec	---	---	---	---	None	
76: Flewsie, high precipitation-----	B	Jan-Dec	---	---	---	---	None	
77: Flewsie, low precipitation-----	B	Jan-Dec	---	---	---	---	None	
Flewsie, dry-----	B	Jan-Dec	---	---	---	---	None	
78: Floodwood-----	C	Jan-Dec	---	---	---	---	None	
79: Floodwood, warm-----	C	Jan-Dec	---	---	---	---	None	
Keeler-----	C	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
80: Floodwood-----	C	Jan-Dec	---	---	---	---	None	
Keeler, warm-----	C	Jan-Dec	---	---	---	---	None	
81: Floodwood-----	C	Jan-Dec	---	---	---	---	None	
Keeler, warm-----	C	Jan-Dec	---	---	---	---	None	
82: Flumecreek-----	B	Jan-Dec	---	---	---	---	None	
83: Flumecreek-----	B	Jan-Dec	---	---	---	---	None	
Stepoff-----	B	Jan-Dec	---	---	---	---	None	
Dworshak, dry-----	C	Jan-Dec	---	---	---	---	None	
84: Fordcreek-----	B	Jan-Dec	---	---	---	---	None	
85: Fordcreek-----	B	Jan-Dec	---	---	---	---	None	
86: Garveson, high precipitation-----	B	Jan-Dec	---	---	---	---	None	
Floodwood-----	C	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
87: Gramil-----	D		In	In	In		
		January	0-6	19-30	0-8	---	None
		February	0-6	19-30	0-8	---	None
		March	0-6	19-30	0-8	Very Brief	None
		April	0-6	19-30	0-8	Very Brief	None
		May	6-12	19-30	0-8	Very Brief	None
		June	6-12	19-30	0-8	---	None
		November	6-12	19-30	0-8	---	None
		December	6-12	19-30	0-8	---	None
		January	0-11	13-19	---	---	None
		February	11-46	60	---	---	None
Lewhand-----	D						
		March	7-24	60	---	---	None
		April	0-2	13-19	---	---	None
		May	9-17	60	---	---	None
		June	0-3	13-19	---	---	None
		July	7-15	60	---	---	None
		August	1-19	13-19	---	---	None
		September	7-18	60	---	---	None
		October	2-19	12-19	---	---	None
		November	12-28	60	---	---	None
		December	5-19	15-19	---	---	None
			15-53	60	---	---	None
88: Gramil-----	D						
		January	25-60	60	---	---	None
		February	48-60	60	---	---	None
		March	56-60	60	---	---	None
		April	0-19	13-19	---	---	None
		May	26-60	60	---	---	None
		June	0-16	13-19	---	---	None
		November	15-60	60	---	---	None
		December					
		January	0-6	19-30	0-8	---	None
		February	0-6	19-30	0-8	---	None
		March	0-6	19-30	0-8	Very Brief	None
		April	0-6	19-30	0-8	Very Brief	None
		May	6-12	19-30	0-8	Very Brief	None
		June	6-12	19-30	0-8	---	None
		November	6-12	19-30	0-8	---	None
		December	6-12	19-30	0-8	---	None

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
88: Reggear-----	C/D		In	In	In			
		January	18-34	20-40	---	---	None	
		February	18-34	20-40	---	---	None	
		March	18-34	20-40	---	---	None	
		April	18-34	20-40	---	---	None	
		May	18-34	20-40	---	---	None	
		June	18-34	20-40	---	---	None	
		July	18-34	20-40	---	---	None	
		November	18-34	20-40	---	---	None	
		December	18-34	20-40	---	---	None	
89: Grandad-----		Jan-Dec	---	---	---	---	None	
90: Grandad, dry-----		Jan-Dec	---	---	---	---	None	
Grandad-----		Jan-Dec	---	---	---	---	None	
91: Grandad, dry-----		Jan-Dec	---	---	---	---	None	
Grandad-----		Jan-Dec	---	---	---	---	None	
92: Grandad-----		Jan-Dec	---	---	---	---	None	
Rettig-----		Jan-Dec	---	---	---	---	None	
93: Grandad, wet-----		Jan-Dec	---	---	---	---	None	
Rettig, wet-----		Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
94: Grandad, dry-----	B		In	In	In		
		Jan-Dec	---	---	---	---	None
		Jan-Dec	---	---	---	---	None
		Jan-Dec	---	---	---	---	None
95: Grangemont-----	B						
		Jan-Dec	---	---	---	---	None
		Jan-Dec	---	---	---	---	None
		Jan-Dec	---	---	---	---	None
Kauder-----	C/D	January	14-36	22-43	---	---	None
		February	19-28	22-43	---	---	None
		March	18-28	22-43	---	---	None
		April	17-30	22-43	---	---	None
		May	16-43	22-43	---	---	None
		June	13-43	22-43	---	---	None
		July	22-43	22-43	---	---	None
		November	14-43	22-43	---	---	None
		December	19-43	22-43	---	---	None
96: Grangemont, dry-----	B	Jan-Dec	---	---	---	---	None
Kauder, dry-----	C/D	January	14-36	22-43	---	---	None
		February	19-28	22-43	---	---	None
		March	18-28	22-43	---	---	None
		April	17-30	22-43	---	---	None
		May	16-43	22-43	---	---	None
		June	13-43	22-43	---	---	None
		July	22-43	22-43	---	---	None
		November	14-43	22-43	---	---	None
		December	19-43	22-43	---	---	None
97: Grangemont-----	B	Jan-Dec	---	---	---	---	None

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
97: Kauder, moist----- C/D			In	In	In			
		January	14-36	22-43	---	---	None	
		February	19-28	22-43	---	---	None	
		March	18-28	22-43	---	---	None	
		April	17-30	22-43	---	---	None	
		May	16-43	22-43	---	---	None	
		June	13-43	22-43	---	---	None	
		July	22-43	22-43	---	---	None	
		November	14-43	22-43	---	---	None	
		December	19-43	22-43	---	---	None	
98: Grangemont, wet----- B		Jan-Dec	---	---	---	---	None	
Riswold----- C		Jan-Dec	---	---	---	---	None	
99: Grasshopper----- C/D								
		January	10-27	60	---	---	None	
		February	5-25	60	---	---	None	
		March	1-24	60	---	---	None	
		April	8-25	60	---	---	None	
		May	5-29	60	---	---	None	
		June	13-30	60	---	---	None	
		July	22-60	60	---	---	None	
		August	30-46	60	---	---	None	
		September	31-46	60	---	---	None	
		October	20-41	60	---	---	None	
		November	14-47	60	---	---	None	
		December	0-40	60	---	---	None	
100: Gwin----- D								
		Jan-Dec	---	---	---	---	None	
Kettenbach----- C								
		Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
101: Gwin-----	D	Jan-Dec	---	---	---	---	None	
Kettenbach-----	C	Jan-Dec	---	---	---	---	None	
Keuterville-----	C	Jan-Dec	---	---	---	---	None	
102: Hildebrand-----	C	January February March April May June July August September October November December	14-43 14-43 14-43 14-43 14-55 24-60 35-60 43-60 55-60 39-60 35-55 20-55	60 60 60 60 60 60 60 60 60 60 60 60	---	---	None None None None None None None None None None None None	
Spacecreek, dry-----	C	January February March April May June July August September October November December	14-40 14-40 14-40 14-40 14-43 24-43 35-60 43-60 51-60 37-60 30-55 14-51	60 60 60 60 60 60 60 60 60 60 60 60	---	---	None None None None None None None None None None None None	
103: Hubub, wet-----	B	Jan-Dec	---	---	---	---	None	



Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
104: Hubub, wet-----			In	In	In			
	B	Jan-Dec	---	---	---	---	None	
Dworshak-----	C	Jan-Dec	---	---	---	---	None	
105: Hubub-----	B	Jan-Dec	---	---	---	---	None	
Lostpete-----	B	Jan-Dec	---	---	---	---	None	
106: Hucberit-----	B	Jan-Dec	---	---	---	---	None	
107: Hucberit-----	B	Jan-Dec	---	---	---	---	None	
Vaywood, high precipitation-----	B	Jan-Dec	---	---	---	---	None	
108: Hugus-----	C	Jan-Dec	---	---	---	---	None	
109: Hugus-----	C	Jan-Dec	---	---	---	---	None	
110: Hugus, moist-----	C	Jan-Dec	---	---	---	---	None	
111: Hugus, high precipitation-----	C	Jan-Dec	---	---	---	---	None	
112: Hugus, moist-----	C	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
112: Hugus-----	C	Jan-Dec	---	---	---	---	None	
113: Hugus-----	C	Jan-Dec	---	---	---	---	None	
Dworshak-----	C	Jan-Dec	---	---	---	---	None	
114: Itzee-----	A	Jan-Dec	---	---	---	---	None	
115: Jacket-----	C	Jan-Dec	---	---	---	---	None	
116: Jacket-----	C	Jan-Dec	---	---	---	---	None	
117: Jacket-----	C	Jan-Dec	---	---	---	---	None	
Wellsbench-----	C	Jan-Dec	---	---	---	---	None	
118: Jacot-----	B	Jan-Dec	---	---	---	---	None	
Garveson-----	B	Jan-Dec	---	---	---	---	None	
119: Jacot-----	B	Jan-Dec	---	---	---	---	None	
Garveson-----	B	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
120: Jaype-----	D	Jan-Dec	---	---	---	---	None	
Revling-----	C	Jan-Dec	---	---	---	---	None	
121: Jaype, dry-----	D	Jan-Dec	---	---	---	---	None	
Revling, dry-----	C	Jan-Dec	---	---	---	---	None	
122: Jaype-----	D	Jan-Dec	---	---	---	---	None	
Statemeadow-----	B	Jan-Dec	---	---	---	---	None	
123: Joel-----	B	Jan-Dec	---	---	---	---	None	
Setters-----	C/D	January February March April May June July November December	0-32 0-32 1-13 1-14 3-32 4-32 4-32 4-32 2-32	10-32 10-32 10-32 10-32 10-32 10-32 10-32 10-32 10-32	---	---	None None None None None None None None None	
124: Johnson-----	B	Jan-Dec	---	---	---	---	None	
125: Johnson-----	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
125: Swayne-----	C	Jan-Dec	---	---	---	---	None	
126: Johnson-----	B	Jan-Dec	---	---	---	---	None	
Swayne-----	C	Jan-Dec	---	---	---	---	None	
127: Johnson-----	B	Jan-Dec	---	---	---	---	None	
Texascreek-----	C	Jan-Dec	---	---	---	---	None	
128: Jury-----	B	Jan-Dec	---	---	---	---	None	
129: Jury-----	B	Jan-Dec	---	---	---	---	None	
130: Jury, cold-----	B	Jan-Dec	---	---	---	---	None	
131: Jury-----	B	Jan-Dec	---	---	---	---	None	
Weitas-----	B	Jan-Dec	---	---	---	---	None	
132: Jury-----	B	Jan-Dec	---	---	---	---	None	
Weitas-----	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
133: Kauder-----	C/D		In	In	In			
		January	14-36	22-43	---	---	None	None
		February	19-28	22-43	---	---	None	None
		March	18-28	22-43	---	---	None	None
		April	17-30	22-43	---	---	None	None
		May	16-43	22-43	---	---	None	None
		June	13-43	22-43	---	---	None	None
		July	22-43	22-43	---	---	None	None
		November	14-43	22-43	---	---	None	None
		December	19-43	22-43	---	---	None	None
134: Keeler, dry-----		Jan-Dec	---	---	---	---	None	None
Keeler-----		Jan-Dec	---	---	---	---	None	None
135: Keeler, moist-----	C	Jan-Dec	---	---	---	---	None	None
Keeler-----	C	Jan-Dec	---	---	---	---	None	None
136: Keeler-----	C	Jan-Dec	---	---	---	---	None	None
Aldermand-----	B	Jan-Dec	---	---	---	---	None	None
137: Keeler-----	C	Jan-Dec	---	---	---	---	None	None
Jacot-----	B	Jan-Dec	---	---	---	---	None	None
138: Keeler-----	C	Jan-Dec	---	---	---	---	None	None

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
138: Lado-----			In	In	In			
	B	Jan-Dec	---	---	---	---	None	
139: Kettenbach-----	C	Jan-Dec	---	---	---	---	None	
Gwin-----	D	Jan-Dec	---	---	---	---	None	
Rock outcrop-----	---	---	---	---	---	---	---	
140: Kettenbach-----	C	Jan-Dec	---	---	---	---	None	
Keuterville-----	C	Jan-Dec	---	---	---	---	None	
141: Keuterville-----	C	Jan-Dec	---	---	---	---	None	
142: Keuterville-----	C	Jan-Dec	---	---	---	---	None	
143: Keuterville-----	C	Jan-Dec	---	---	---	---	None	
Rock outcrop-----	---	Jan-Dec	---	---	---	---	None	
144: Klickson-----	C	Jan-Dec	---	---	---	---	None	
145: Klickson-----	C	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
146: Klickson-----	C	Jan-Dec	---	---	---	---	None	
Agatha-----	B	Jan-Dec	---	---	---	---	None	
147: Klickson-----	C	Jan-Dec	---	---	---	---	None	
Kettenbach-----	C	Jan-Dec	---	---	---	---	None	
148: Klickson-----	C	Jan-Dec	---	---	---	---	None	
Rock outcrop-----	---	---	---	---	---	---	---	
Kettenbach-----	C	Jan-Dec	---	---	---	---	None	
149: Konkol-----	B	Jan-Dec	---	---	---	---	None	
Revling-----	C	Jan-Dec	---	---	---	---	None	
150: Kooskia-----	C/D	January February March April May June November December	4-7 5-7 6-8 7-7 6-9 12-12 6-40 5-8	13-40 13-40 13-40 13-40 13-40 13-40 13-40 13-40	---	---	None None None None None None None None	

Table 29.—Water Features—Continued

	Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
151:	Kooskia-----	C/D		In	In	In			
			January	4-7	13-40	---	---	None	
			February	5-7	13-40	---	---	None	
			March	6-8	13-40	---	---	None	
			April	7-7	13-40	---	---	None	
			May	6-9	13-40	---	---	None	
			June	12-12	13-40	---	---	None	
			November	6-40	13-40	---	---	None	
			December	5-8	13-40	---	---	None	
152:	Kruse-----	C	Jan-Dec	---	---	---	---	None	
153:	Kruse-----	C	Jan-Dec	---	---	---	---	None	
154:	Kruse-----	C	Jan-Dec	---	---	---	---	None	
Aldermand-----		B	Jan-Dec	---	---	---	---	None	
155:	Kruse-----	C	Jan-Dec	---	---	---	---	None	
Aldermand-----		B	Jan-Dec	---	---	---	---	None	
156:	Kruse-----	C	Jan-Dec	---	---	---	---	None	
McCrosket, dry-----		B	Jan-Dec	---	---	---	---	None	
157:	Kruse-----	C	Jan-Dec	---	---	---	---	None	



Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
157: Noil-----	B		In	In	In		
		Jan-Dec	---	---	---	---	None
158: Kruse-----	C						
		Jan-Dec	---	---	---	---	None
Teakean-----	C/D						
		January	16-26	24-44	---	---	None
		February	17-27	24-44	---	---	None
		March	17-28	24-44	---	---	None
		April	19-28	24-44	---	---	None
		May	18-30	24-44	---	---	None
		June	24-32	24-44	---	---	None
		November	17-44	24-44	---	---	None
		December	17-28	24-44	---	---	None
159: Larkin-----	C						
		Jan-Dec	---	---	---	---	None
Driscoll-----	C/D						
		January	12-36	18-42	---	---	None
		February	10-34	18-42	---	---	None
		March	11-35	18-42	---	---	None
		April	11-42	18-42	---	---	None
		December	16-42	18-42	---	---	None

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
160: Lebaron-----	C/D		In	In	In		
		January	0-12	16-27	---	---	None
		February	16-46	60	---	---	None
		March	0-4	60	---	---	None
		April	1-6	60	---	---	None
		May	1-6	60	---	---	None
		June	2-20	60	---	---	None
		July	4-27	60	---	---	None
			6-27	16-27	---	---	None
			16-28	60	---	---	None
		August	39-60	60	---	---	None
		October	55-60	60	---	---	None
		November	0-27	16-27	---	---	None
	26-60	60	---	---	None		
	0-16	16-27	---	---	None		
	16-60	60					
Latahco-----	C/D						
		January	7-30	15-30	---	---	None
		February	7-19	15-30	---	---	None
		March	7-19	15-30	---	---	None
		April	10-23	15-30	---	---	None
		May	10-30	15-30	---	---	None
		June	14-30	15-30	---	---	None
		November	14-30	15-30	---	---	None
		December	10-30	15-30	---	---	None

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding	
			Upper limit	Lower limit	Surface water depth	Duration Frequency
161: Lewhand-----D	D		In	In	In	
		January	0-11 11-46	13-19 60	---	None
		February	0-4 7-24	13-19 60	---	None
		March	0-2 9-17	13-19 60	---	None
		April	0-3 7-15	13-19 60	---	None
		May	1-19 7-18	13-19 60	---	None
		June	2-19 12-28	12-19 60	---	None
		July	5-19 15-53	15-19 60	---	None
		August	25-60 48-60	60 60	---	None
		September	56-60 0-19	60 13-19	---	None
		October	26-60 0-16	60 13-19	---	None
		November	15-60 60	60	---	None
Burntcreek-----B/D	B/D					
		January	7-40	>72	---	None
		February	7-19	>72	---	None
		March	7-19	>72	---	None
		April	10-23	>72	---	None
		May	10-35	>72	---	None
		June	14-46	>72	---	None
		July	19-54	>72	---	None
		August	39-72	>72	---	None
		September	50-72	>72	---	None
		October	29-72	>72	---	None
		November	14-72	>72	---	None
		December	10-72	>72	---	None

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
162 : Lewhand-----D			In	In	In			
		January	0-11 11-46	13-19 60	---	---	None	
		February	0-4 7-24	13-19 60	---	---	None	
		March	0-2 9-17	13-19 60	---	---	None	
		April	0-3 7-15	13-19 60	---	---	None	
		May	1-19 7-18	13-19 60	---	---	None	
		June	2-19 12-28	12-19 60	---	---	None	
		July	5-19 15-53	15-19 60	---	---	None	
		August	25-60 48-60	60 60	---	---	None	
		September	56-60 0-19	60 13-19	---	---	None	
		October	26-60 0-16	60 13-19	---	---	None	
		November	15-60 0-4	60 59	---	---	None	
Teneb-----C/D		January	0-4 0-4	59 59	---	---	None	Ve
		February	0-13 0-4	59 59	---	---	None	
		March	0-4 0-7	59 59	---	---	None	
		April	0-20 0-33	59 59	---	---	None	
		May	18-59 11-59	59 59	---	---	None	
		June	0-59 0-9	59 59	---	---	None	
		July	0-7 0-7	59 59	---	---	None	
		August			---	---	None	
		September			---	---	None	
		October			---	---	None	
		November			---	---	None	
		December			---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
163: Longbar-----	B	Jan-Dec	---	---	---	---	None	
Bigtalk-----	B	Jan-Dec	---	---	---	---	None	
164: Longbar-----	B	Jan-Dec	---	---	---	---	None	
Bigtalk-----	B	Jan-Dec	---	---	---	---	None	
165: Longpen-----	C	Jan-Dec	---	---	---	---	None	
166: Longpen-----	C	Jan-Dec	---	---	---	---	None	
167: Meland-----	C	Jan-Dec	---	---	---	---	None	
Jacket-----	C	Jan-Dec	---	---	---	---	None	
168: Meland-----	C	Jan-Dec	---	---	---	---	None	
Keuterville-----	C	Jan-Dec	---	---	---	---	None	
169: Mushel-----	B	Jan-Dec	---	---	---	---	None	
Brodeer-----	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

	Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
170:	Mushel-----			In	In	In			
		B	Jan-Dec	---	---	---	---	None	
	Dullaxe-----	B	Jan-Dec	---	---	---	---	None	
171:	Nakarna, high precipitation-----	B	Jan-Dec	---	---	---	---	None	
172:	Nakarna, high precipitation-----	B	Jan-Dec	---	---	---	---	None	
173:	Nakarna-----	B	Jan-Dec	---	---	---	---	None	
	Nakarna, warm-----	B	Jan-Dec	---	---	---	---	None	
174:	Narnett-----	C	Jan-Dec	---	---	---	---	None	
	Jury-----	B	Jan-Dec	---	---	---	---	None	
175:	Neva-----	B	Jan-Dec	---	---	---	---	None	
176:	Newlig-----	B	Jan-Dec	---	---	---	---	None	
177:	Noil-----	B	Jan-Dec	---	---	---	---	None	
	Keeler-----	C	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
178: Noil-----	B	Jan-Dec	---	---	---	---	None
Bouldercreek, warm-----	B	Jan-Dec	---	---	---	---	None
Rock outcrop-----	---	---	---	---	---	---	---
179: Norwidge, moist-----	B	Jan-Dec	---	---	---	---	None
Threebear, moist-----	B/D	Jan-Dec	---	---	---	---	None
		January	14-36	22-43	---	---	None
		February	19-28	22-43	---	---	None
		March	18-28	22-43	---	---	None
		April	17-30	22-43	---	---	None
		May	16-43	22-43	---	---	None
		June	13-43	22-43	---	---	None
		July	22-43	22-43	---	---	None
		November	14-43	22-43	---	---	None
		December	4-43	22-43	---	---	None
180: Odonnell-----	C/D	Jan-Dec	---	---	---	---	None
		January	14-36	21-44	---	---	None
		February	19-28	21-44	---	---	None
		March	18-28	21-44	---	---	None
		April	17-30	21-44	---	---	None
		May	16-44	21-44	---	---	None
		June	13-44	21-44	---	---	None
		November	14-44	21-44	---	---	None
		December	4-44	21-44	---	---	None
Grandad-----	B	Jan-Dec	---	---	---	---	None

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
181: Odonnell-----	C/D	January	In	In	In			
		February	14-36	21-44	---	---	None	
		March	19-28	21-44	---	---	None	
		April	18-28	21-44	---	---	None	
		May	17-30	21-44	---	---	None	
		June	16-44	21-44	---	---	None	
		November	13-44	21-44	---	---	None	
		December	14-44	21-44	---	---	None	
			4-44	21-44	---	---	None	
182: Oxyaquic Xerofluvents, occasionally flooded-----	A/D							
		January	7-39	60	---	---	None	
		February	0-19	60	---	---	None	
		March	0-19	60	---	---	None	
		April	0-23	60	---	---	None	
		May	0-35	60	---	---	None	
		July	19-54	60	---	---	None	
		August	39-60	60	---	---	None	
		September	50-60	60	---	---	None	
		October	29-60	60	---	---	None	
		November	14-60	60	---	---	None	
		December	10-60	60	---	---	None	
Itzee-----	A	Jan-Dec	---	---	---	---	None	
183: Pits, quarry-----	---	Jan-Dec	---	---	---	---	None	
184: Placer-----	B	Jan-Dec	---	---	---	---	None	
Dowper-----	B	Jan-Dec	---	---	---	---	None	
Grangemont-----	B	Jan-Dec	---	---	---	---	None	



Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
185: Poorman, dry-----	B	Jan-Dec	---	---	---	---	None	
186: Poorman, dry-----	B	Jan-Dec	---	---	---	---	None	
Poorman-----	B	Jan-Dec	---	---	---	---	None	
187: Poorman-----	B	Jan-Dec	---	---	---	---	None	
Grandad-----	B	Jan-Dec	---	---	---	---	None	
188: Poorman-----	B	Jan-Dec	---	---	---	---	None	
Grandad-----	B	Jan-Dec	---	---	---	---	None	
189: Poorman-----	B	Jan-Dec	---	---	---	---	None	
Grandad, dry-----	B	Jan-Dec	---	---	---	---	None	
190: Poorman-----	B	Jan-Dec	---	---	---	---	None	
Grandad, dry-----	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
191: Reggear-----	C/D		In	In	In			
		January	18-34	20-40	---	---	None	None
		February	18-34	20-40	---	---	None	None
		March	18-34	20-40	---	---	None	None
		April	18-34	20-40	---	---	None	None
		May	18-34	20-40	---	---	None	None
		June	18-34	20-40	---	---	None	None
		July	18-34	20-40	---	---	None	None
		November	18-34	20-40	---	---	None	None
		December	18-34	20-40	---	---	None	None
Kauder-----	C/D	January	14-36	22-43	---	---	None	None
		February	19-28	22-43	---	---	None	None
		March	18-28	22-43	---	---	None	None
		April	17-30	22-43	---	---	None	None
		May	16-43	22-43	---	---	None	None
		June	13-43	22-43	---	---	None	None
		July	22-43	22-43	---	---	None	None
		November	14-43	22-43	---	---	None	None
		December	19-43	22-43	---	---	None	None
192: Reggear-----	C/D	January	18-34	20-40	---	---	None	None
		February	18-34	20-40	---	---	None	None
		March	18-34	20-40	---	---	None	None
		April	18-34	20-40	---	---	None	None
		May	18-34	20-40	---	---	None	None
		June	18-34	20-40	---	---	None	None
		July	18-34	20-40	---	---	None	None
		November	18-34	20-40	---	---	None	None
		December	18-34	20-40	---	---	None	None
Seddown-----	B	Jan-Dec	---	---	---	---	None	
193: Rettig, high elevation-----	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
194: Rettig-----			In	In	In			
	B	Jan-Dec	---	---	---	---	None	
195: Rettig, cold-----	B	Jan-Dec	---	---	---	---	None	
196: Rettig, cool-----	B	Jan-Dec	---	---	---	---	None	
Rettig, dry-----	B	Jan-Dec	---	---	---	---	None	
197: Rettig-----	B	Jan-Dec	---	---	---	---	None	
Grandad-----	B	Jan-Dec	---	---	---	---	None	
198: Rettig, warm, dry-----	B	Jan-Dec	---	---	---	---	None	
Township-----	B	Jan-Dec	---	---	---	---	None	
199: Rettig-----	B	Jan-Dec	---	---	---	---	None	
Township, wet-----	B	Jan-Dec	---	---	---	---	None	
Stepoff-----	B	Jan-Dec	---	---	---	---	None	
200: Riswold-----	C	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
200: Cranberry-----	B	Jan-Dec	---	---	---	---	None	
201: Riswold-----	C	Jan-Dec	---	---	---	---	None	
Grangemont-----	B	Jan-Dec	---	---	---	---	None	
202: Rock outcrop-----	---	---	---	---	---	---	---	
Whiskeycreek-----	D	Jan-Dec	---	---	---	---	None	
Texascreek, dry-----	C	Jan-Dec	---	---	---	---	None	
203: Scaler-----	B	Jan-Dec	---	---	---	---	None	
204: Scaler-----	B	Jan-Dec	---	---	---	---	None	
Grandad-----	B	Jan-Dec	---	---	---	---	None	
205: Scaler-----	B	Jan-Dec	---	---	---	---	None	
Grangemont-----	B	Jan-Dec	---	---	---	---	None	
206: Scand-----	B	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
206: Scaler-----			In	In	In			
	B	Jan-Dec	---	---	---	---	None	
207: Seddown-----	B	Jan-Dec	---	---	---	---	None	
208: Seddown-----	B	Jan-Dec	---	---	---	---	None	
209: Seddown-----	B	Jan-Dec	---	---	---	---	None	
210: Setters-----	C/D	Jan-Dec	---	---	---	---	None	
		January	0-32	10-32	0-8	Brief	Occasional	
		February	0-32	10-32	0-8	Brief	Occasional	
		March	1-13	10-32	0-8	Brief	Occasional	
		April	1-14	10-32	0-8	Brief	Occasional	
		May	3-32	10-32	0-8	Brief	Occasional	
		June	4-32	10-32	0-8	Brief	Occasional	
		July	4-32	10-32	0-8	Brief	Occasional	
		November	4-32	10-32	0-8	Brief	Occasional	
		December	2-32	10-32	0-8	Brief	Occasional	
211: Shattuck-----	C	Jan-Dec	---	---	---	---	None	
212: Shattuck-----	C	Jan-Dec	---	---	---	---	None	
213: Shattuck, moist-----	C	Jan-Dec	---	---	---	---	None	
214: Shattuck, moist-----	C	Jan-Dec	---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
214: Dworshak, moist-----	C	Jan-Dec	---	---	---	---	None
215: Shattuck-----	C	Jan-Dec	---	---	---	---	None
Dworshak-----	C	Jan-Dec	---	---	---	---	None
216: Sly-----	C	Jan-Dec	---	---	---	---	None
Wilkins-----	D	Jan-Dec	---	---	---	---	None
217: Southwick-----	C/D	January	0-30	25-30	---	---	None
		February	0-30	25-30	---	---	None
		March	1-13	25-30	---	---	None
		April	1-14	25-30	---	---	None
		May	5-29	25-30	---	---	None
		June	13-30	25-30	---	---	None
		July	4-30	25-30	---	---	None
		October	21-30	25-30	---	---	None
		November	14-30	25-30	---	---	None
		December	0-30	25-30	---	---	None
		January	18-36	24-38	---	---	None
		February	18-36	24-38	---	---	None
218: Southwick-----	C/D	March	18-36	24-38	---	---	None
		April	18-36	24-38	---	---	None
		May	18-36	24-38	---	---	None
		June	18-36	24-38	---	---	None
		July	18-36	24-38	---	---	None
		November	18-36	24-38	---	---	None
		December	18-36	24-38	---	---	None
		February	18-36	24-38	---	---	None
		March	18-36	24-38	---	---	None
		April	18-36	24-38	---	---	None

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
218: Larkin-----	C		In	In	In		
		Jan-Dec	---	---	---	---	None
219: Statemeadow-----	B						
		Jan-Dec	---	---	---	---	None
Reggear-----	C/D						
		January	18-34	20-40	---	---	None
		February	18-34	20-40	---	---	None
		March	18-34	20-40	---	---	None
		April	18-34	20-40	---	---	None
		May	18-34	20-40	---	---	None
		June	18-34	20-40	---	---	None
		July	18-34	20-40	---	---	None
		November	18-34	20-40	---	---	None
		December	18-34	20-40	---	---	None
220: Swayne-----	C						
		Jan-Dec	---	---	---	---	None
221: Taney-----	C/D						
		January	16-37	27-40	---	---	None
		February	16-37	27-40	---	---	None
		March	16-37	27-40	---	---	None
		April	16-37	27-40	---	---	None
		May	16-37	27-40	---	---	None
		June	16-37	27-40	---	---	None
		July	16-37	27-40	---	---	None
		November	16-37	27-40	---	---	None
		December	16-37	27-40	---	---	None
222: Taney-----	C						
		February	24-30	29-36	---	---	None
		March	24-30	29-36	---	---	None
		April	24-30	29-36	---	---	None
Joel-----	C						
		Jan-Dec	---	---	---	---	None

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency
223: Taney-----	C/D		In	In	In		
		January	16-37	27-40	---	---	None
		February	16-37	27-40	---	---	None
		March	16-37	27-40	---	---	None
		April	16-37	27-40	---	---	None
		May	16-37	27-40	---	---	None
		June	16-37	27-40	---	---	None
		July	16-37	27-40	---	---	None
		November	16-37	27-40	---	---	None
		December	16-37	27-40	---	---	None
McCrosket-----	B	Jan-Dec	---	---	---	---	None
224: Taney-----	C/D						
		January	16-37	27-40	---	---	None
		February	16-37	27-40	---	---	None
		March	16-37	27-40	---	---	None
		April	16-37	27-40	---	---	None
		May	16-37	27-40	---	---	None
		June	16-37	27-40	---	---	None
		July	16-37	27-40	---	---	None
		November	16-37	27-40	---	---	None
		December	16-37	27-40	---	---	None
Setters-----	C/D						
		January	0-32	10-32	0-8	Brief	Occasional
		February	0-32	10-32	0-8	Brief	Occasional
		March	1-13	10-32	0-8	Brief	Occasional
		April	1-14	10-32	0-8	Brief	Occasional
		May	3-32	10-32	0-8	Brief	Occasional
		June	4-32	10-32	0-8	Brief	Occasional
		July	4-32	10-32	0-8	Brief	Occasional
		November	4-32	10-32	0-8	Brief	Occasional
		December	2-32	10-32	0-8	Brief	Occasional



Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table		Ponding	
			Upper limit	Lower limit	Surface water depth	Duration Frequency
225: Taney-----	C/D		In	In	In	
		January	16-37	27-40	---	None
		February	16-37	27-40	---	None
		March	16-37	27-40	---	None
		April	16-37	27-40	---	None
		May	16-37	27-40	---	None
		June	16-37	27-40	---	None
		July	16-37	27-40	---	None
		November	16-37	27-40	---	None
		December	16-37	27-40	---	None
Setters-----	C/D					
		January	0-32	10-32	---	None
		February	0-32	10-32	---	None
		March	1-13	10-32	---	None
		April	1-14	10-32	---	None
		May	3-32	10-32	---	None
		June	4-32	10-32	---	None
		July	4-32	10-32	---	None
		November	4-32	10-32	---	None
		December	2-32	10-32	---	None
226: Teakean-----	C/D					
		January	16-26	24-44	---	None
		February	17-27	24-44	---	None
		March	17-28	24-44	---	None
		April	19-28	24-44	---	None
		May	18-30	24-44	---	None
		June	24-32	24-44	---	None
		November	17-44	24-44	---	None
		December	17-28	24-44	---	None

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
227: Teneb-----			In	In	In			
	C/D	January	0-4	59	---	---	None	Ve
		February	0-4	59	---	---	None	Ve
		March	0-13	59	---	---	None	Ve
		April	0-4	59	---	---	None	Ve
		May	0-7	59	---	---	None	Ve
		June	0-20	59	---	---	None	Ve
		July	0-33	59	---	---	None	Ve
		August	18-59	59	---	---	None	Ve
		September	11-59	59	---	---	None	Ve
		October	0-59	59	---	---	None	Ve
		November	0-9	59	---	---	None	Ve
		December	0-7	59	---	---	None	Ve
228: Texascreek-----	C	Jan-Dec	---	---	---	---	None	
Rock outcrop-----	---	---	---	---	---	---	---	
229: Texascreek, dry-----	C	Jan-Dec	---	---	---	---	None	
Whiskeycreek-----	D	Jan-Dec	---	---	---	---	None	
230: Norwidge-----	B	Jan-Dec	---	---	---	---	None	
Threebear-----	B/D	January	14-35	22-43	---	---	None	
		February	18-28	22-43	---	---	None	
		March	18-28	22-43	---	---	None	
		April	18-30	22-43	---	---	None	
		May	16-43	22-43	---	---	None	
		June	13-43	22-43	---	---	None	
		November	14-43	22-43	---	---	None	
		December	4-43	22-43	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
231: Tomodo-----	B	Jan-Dec	---	---	---	---	None	
232: Tomodo-----	B	Jan-Dec	---	---	---	---	None	
Lado-----	B	Jan-Dec	---	---	---	---	None	
233: Township-----	B	Jan-Dec	---	---	---	---	None	
Rettig-----	B	Jan-Dec	---	---	---	---	None	
234: Township-----	B	Jan-Dec	---	---	---	---	None	
Rettig-----	B	Jan-Dec	---	---	---	---	None	
235: Township, dry-----	B	Jan-Dec	---	---	---	---	None	
Rettig, low precipitation-----	B	Jan-Dec	---	---	---	---	None	
Nakarna, dry-----	B	Jan-Dec	---	---	---	---	None	
236: Trappercreek-----	B	Jan-Dec	---	---	---	---	None	
Narnett-----	C	Jan-Dec	---	---	---	---	None	

Table 29.-Water Features-Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
237: UVI-----	B	Jan-Dec	In	In	In			
			---	---	---	---	None	
238: UVI-----	B	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
239: Vaywood, high precipitation-----	B	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
Vaywood, dry-----	B	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
240: Vaywood-----	B	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
241: Vaywood-----	B	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
Handoff-----	B	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
242: Water-----	---	---	---	---	---	---	---	
			---	---	---	---	---	
243: Wellsbench-----	C	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
244: Wellsbench-----	C	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	
Lacy-----	D	Jan-Dec	---	---	---	---	None	
			---	---	---	---	None	

Table 29.—Water Features—Continued

Map symbol and soil name	Hydro- logic group	Month	Water table			Ponding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Du
245: Wilkins-----D			In	In	In			
		January	0-30	25-30	---	---	None	B
		February	0-30	25-30	---	---	None	B
		March	1-13	25-30	---	---	None	B
		April	1-14	25-30	---	---	None	B
		May	5-29	25-30	---	---	None	B
		June	13-30	25-30	---	---	None	B
		July	4-30	25-30	---	---	None	B
		October	21-30	25-30	---	---	None	B
		November	14-30	25-30	---	---	None	B
		December	0-30	25-30	---	---	None	B

Table 30.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a were not estimated.)

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
1: Agatha, very rocky----- Lithic bedrock		40-60	---	Indurated	0	---
Rock outcrop----- Lithic bedrock		0	---	Indurated	0	---
2: Agatha----- Lithic bedrock		40-60	---	Indurated	0	---
3: Agatha----- Lithic bedrock		40-60	---	Indurated	0	---
4: Ahsahka----- ---		---	---	---	0	---
Fordcreek----- Paralithic bedrock		40-60	---	Moderately cemented	0	---
5: Ahsahka----- ---		---	---	---	0	---
Whiskeycreek----- Lithic bedrock		10-20	---	Indurated	0	---
6: Aldermand----- Strongly contrasting textural stratification		20-55	---	Noncemented	0	---
7: Aldermand----- Strongly contrasting textural stratification		20-55	---	Noncemented	0	---
8: Aldermand, dry----- Strongly contrasting textural stratification		20-55	---	Noncemented	0	---

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		<i>In</i>	<i>In</i>		<i>In</i>	<i>In</i>
9: Aquandic Cryaquepts----	---	---	---	---	0	---
10: Aquandic Endoaquepts---	---	---	---	---	0	---
Aquandic Dystrudepts---	---	---	---	---	0	---
11: Bandmill, dry-----	---	---	---	---	0	---
Grangemont-----	---	---	---	---	0	---
Bargamin-----	---	---	---	---	0	---
12: Bandmill-----	---	---	---	---	0	---
Riswold-----	---	---	---	---	0	---
13: Berthahill, moist-----	Strongly contrasting textural stratification	14-20	---	Noncemented	0	---
Handoff-----	Strongly contrasting textural stratification	17-30	---	Noncemented	0	---
14: Berthahill-----	Strongly contrasting textural stratification	14-20	---	Noncemented	0	---
Handoff-----	Strongly contrasting textural stratification	17-30	---	Noncemented	0	---

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
15: Berthahill-----	Strongly contrasting textural stratification	14-20	---	Noncemented	0	---
Shattuck-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---
16: Bigtalk, cool-----	---	---	---	---	0	---
Bigtalk, wet-----	---	---	---	---	0	---
17: Bigtalk-----	---	---	---	---	0	---
18: Bigtalk, cool-----	---	---	---	---	0	---
Floodwood, cool-----	---	---	---	---	0	---
19: Bigtalk, cool-----	---	---	---	---	0	---
Keeler, cool-----	---	---	---	---	0	---
20: Bouldercreek, moist----	Strongly contrasting textural stratification	14-26	---	Noncemented	0	---
21: Bouldercreek-----	---	---	---	---	0	---
22: Bouldercreek-----	---	---	---	---	0	---



Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Initial	Total	
		In	In	In	In	
23: Bouldercreek, moist----	Strongly contrasting textural stratification	14-26	---	0	---	High
Brodeer-----	---	---	---	0	---	High
24: Bouldercreek-----	Strongly contrasting textural stratification	14-26	---	0	---	High
Brodeer-----	---	---	---	0	---	High
25: Bouldercreek-----	Strongly contrasting textural stratification	14-26	---	0	---	High
Judgetown-----	Paralithic bedrock	40-60	---	0	---	High
26: Bouldercreek, high precipitation-----	---	---	---	0	---	High
Marblecreek-----	---	---	---	0	---	Moderate
27: Bouldercreek, cool, dry	---	---	---	0	---	High
Rettig, cool-----	---	---	---	0	---	High
28: Brequito, dry-----	---	---	---	0	---	Moderate
29: Brequito-----	---	---	---	0	---	Moderate
Grangemont-----	---	---	---	0	---	High

Table 30.-Soil Features-Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Initial	Total	
		In	In	In	In	
30: Brequito-----	---	---	---	0	---	Moderate
Lado, dry-----	---	---	---	0	---	High
31: Brequito-----	---	---	---	0	---	Moderate
Lado, dry-----	---	---	---	0	---	High
32: Brequito-----	---	---	---	0	---	Moderate
Mushel-----	---	---	---	0	---	Moderate
33: Brequito-----	---	---	---	0	---	Moderate
Mushel-----	---	---	---	0	---	Moderate
34: Brodeer, dry-----	---	---	---	0	---	High
Brodeer-----	---	---	---	0	---	High
35: Brodeer-----	---	---	---	0	---	High
Mushel-----	---	---	---	0	---	Moderate
36: Brodeer, warm-----	---	---	---	0	---	High
Mushel, dry-----	---	---	---	0	---	Moderate
37: Brodeer-----	---	---	---	0	---	High
Bouldercreek-----	Strongly contrasting textural stratification	14-26	---	0	---	High
38: Brodeer-----	---	---	---	0	---	High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial Total	
		In	In		In	
38: Flewsie, dry-----	---	---	---	---	0	High
39: Brodeer-----	---	---	---	---	0	High
Lostpete-----	---	---	---	---	0	High
40: Brodeer, moist-----	---	---	---	---	0	High
Lostpete, moist-----	---	---	---	---	0	High
41: Brodeer, dry-----	---	---	---	---	0	High
Mushel-----	---	---	---	---	0	Moderate
42: Brodeer-----	---	---	---	---	0	High
Mushel-----	---	---	---	---	0	Moderate
43: Burntcreek-----	---	---	---	---	0	Moderate
44: Campra-----	---	---	---	---	0	Moderate
45: Campra-----	---	---	---	---	0	Moderate
Sly-----	---	---	---	---	0	Moderate
46: Carlinton-----	---Fragipan	22-40	20-38	Noncemented	0	High
47: Carlinton-----	---Fragipan	20-40	---	Noncemented	0	High
48: Carlinton-----	---Fragipan	20-40	---	Noncemented	0	High
Kruse-----	---	---	---	---	0	Moderate

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
49: Carlinton-----	Fragipan	22-40	20-38	Noncemented	0	High
Seddow-----	Lithic bedrock	40-60	---	Indurated	0	Moderate
50: Caseycreek-----	---	---	---	---	0	Moderate
51: Cavendish-----	Paralithic bedrock	40-60	---	Moderately cemented	0	Moderate
52: Cavendish-----	Paralithic bedrock	40-60	---	Moderately cemented	0	Moderate
Taney-----	Fragipan	20-40	---	Noncemented	0	High
53: Cobbler-----	---	---	---	---	0	Moderate
Aldermand-----	Strongly contrasting textural stratification	20-55	---	Noncemented	0	Moderate
54: Cobbler-----	---	---	---	---	0	Moderate
Noil-----	Paralithic bedrock	40-60	3-10	Moderately cemented	0	Moderate
55: Cranberry-----	---	---	---	---	0	High
Riswold-----	---	---	---	---	0	High
56: Crumarine-----	---	---	---	---	0	Moderate
57: Dam-----	---	---	---	---	---	---

Table 30.-Soil Features-Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
58: Driscoll----- Abrupt textural change		8-45	---	Noncemented	0	---
59: Driscoll----- Abrupt textural change		8-45	---	Noncemented	0	---
Larkin----- ---		---	---	---	0	---
60: Dullaxe, high elevation		---	---	---	0	---
Dullaxe----- ---		---	---	---	0	---
61: Dullaxe, dry----- ---		---	---	---	0	---
Dullaxe, wet----- ---		---	---	---	0	---
62: Dullaxe----- ---		---	---	---	0	---
Brodeer----- ---		---	---	---	0	---
63: Dullaxe----- ---		---	---	---	0	---
Brodeer----- ---		---	---	---	0	---
64: Dullaxe----- ---		---	---	---	0	---
Judgetown----- Paralithic bedrock		40-60	---	Moderately cemented	0	---
65: Dullaxe----- ---		---	---	---	0	---
Judgetown, moist----- Paralithic bedrock		40-60	---	Moderately cemented	0	---
66: Dullaxe----- ---		---	---	---	0	---

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Initial	Total	
		In	In	In	In	
66: Jury, moist-----	---	---	---	0	---	High
67: Dumps, wood slash-----	---	---	---	---	---	---
68: Dworshak-----	---	---	---	0	---	High
69: Dworshak-----	---	---	---	0	---	High
Brequito-----	---	---	---	0	---	Moderate
70: Elkberry-----	---	---	---	0	---	High
Elkberry, wet-----	---	---	---	0	---	High
71: Elkberry-----	---	---	---	0	---	High
Dworshak-----	---	---	---	0	---	High
72: Elkridge-----	---	---	---	0	---	Moderate
Riswold-----	---	---	---	0	---	High
73: Elkridge-----	---	---	---	0	---	Moderate
Riswold-----	---	---	---	0	---	High
74: Fico, dry-----	Paralithic bedrock	40-60	---	0	---	High
Hucberit, warm-----	---	---	---	0	---	High
75: Fico-----	Paralithic bedrock	40-60	---	0	---	High
Weitas-----	---	---	---	0	---	High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
76: Flewsie, high precipitation-----	---	---	---	---	0	---
77: Flewsie, low precipitation-----	---	---	---	---	0	---
Flewsie, dry-----	---	---	---	---	0	---
78: Floodwood-----	---	---	---	---	0	---
79: Floodwood, warm-----	---	---	---	---	0	---
Keeler-----	---	---	---	---	0	---
80: Floodwood-----	---	---	---	---	0	---
Keeler, warm-----	---	---	---	---	0	---
81: Floodwood-----	---	---	---	---	0	---
Keeler, warm-----	---	---	---	---	0	---
82: Flumecreek-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---
83: Flumecreek-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---
Stepoff-----	---	---	---	---	0	---
Dworshak, dry-----	---	---	---	---	0	---

Table 30.-Soil Features-Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
84: Fordcreek-----	Paralithic bedrock	40-60	---	Moderately cemented	0 ---	Moderate
85: Fordcreek-----	Paralithic bedrock	40-60	---	Moderately cemented	0 ---	Moderate
86: Garveson, high precipitation-----	Strongly contrasting textural stratification	14-20	---	Noncemented	0 ---	High
Floodwood-----	---	---	---	---	0 ---	Moderate
87: Gramil-----	Abrupt textural change	20-30	---	Noncemented	0 ---	Moderate
Lewhand-----	Fragipan	13-19	14-29	Noncemented	0 ---	High
88: Gramil-----	Abrupt textural change	20-30	---	Noncemented	0 ---	Moderate
Reggear-----	Fragipan	20-40	46-66	Noncemented	0 ---	High
89: Grandad-----	---	---	---	---	0 ---	High
90: Grandad, dry-----	---	---	---	---	0 ---	High
Grandad-----	---	---	---	---	0 ---	High
91: Grandad, dry-----	---	---	---	---	0 ---	High
Grandad-----	---	---	---	---	0 ---	High
92: Grandad-----	---	---	---	---	0 ---	High
Rettig-----	---	---	---	---	0 ---	High



Table 30.-Soil Features-Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
93: Grandad, wet-----	---	---	---	---	---	High
Rettig, wet-----	---	---	---	---	---	High
94: Grandad, dry-----	---	---	---	---	---	High
Scand-----	---	---	---	---	---	High
95: Grangemont-----	---	---	---	---	---	High
Kauder-----	---	---	---	---	---	High
Kauder-----	---	---	---	---	---	High
96: Grangemont, dry-----	---	---	---	---	---	High
Kauder, dry-----	---	---	---	---	---	High
97: Grangemont-----	---	---	---	---	---	High
Kauder, moist-----	---	---	---	---	---	High
98: Grangemont, wet-----	---	---	---	---	---	High
Riswold-----	---	---	---	---	---	High
99: Grasshopper-----	---	---	---	---	---	High
Grasshopper-----	---	---	---	---	---	High
100: Gwin-----	---	---	---	---	---	High
Kettenbach-----	---	---	---	---	---	High
101: Gwin-----	---	---	---	---	---	High
Kettenbach-----	---	---	---	---	---	High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
101: Keuterville-----	---	---	---	---	0	---
102: Hildebrand-----	---	---	---	---	0	---
Spacecreek, dry-----	---	---	---	---	0	---
103: Hubub, wet-----	---	---	---	---	0	---
104: Hubub, wet-----	---	---	---	---	0	---
Dworshak-----	---	---	---	---	0	---
105: Hubub-----	---	---	---	---	0	---
Lostpete-----	---	---	---	---	0	---
106: Hucberit-----	---	---	---	---	0	---
107: Hucberit-----	---	---	---	---	0	---
Vaywood, high precipitation-----	Strongly contrasting textural stratification	14-24	---	Noncemented	0	---
108: Hugus-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
109: Hugus-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
110: Hugus, moist-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
111: Hugus, high precipitation-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
112: Hugus, moist-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
Hugus-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
113: Hugus-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
Dworshak-----	---	---	---	---	0	---
114: Itzee-----	---	---	---	---	0	---
115: Jacket-----	---	---	---	---	0	---
116: Jacket-----	---	---	---	---	0	---
117: Jacket-----	---	---	---	---	0	---
Wellsbench-----	Lithic bedrock	40-60	---	Indurated	0	---

Table 30.-Soil Features-Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
118: Jacot-----	---	---	---	---	0	High
Garveson-----	Strongly contrasting textural stratification	14-20	---	Noncemented	0	High
119: Jacot-----	---	---	---	---	0	High
Garveson-----	Strongly contrasting textural stratification	10-20	---	Noncemented	0	High
120: Jaype-----	---	---	---	---	0	Moderate
Revling-----	---	---	---	---	0	High
121: Jaype, dry-----	---	---	---	---	0	Moderate
Revling, dry-----	---	---	---	---	0	High
122: Jaype-----	---	---	---	---	0	Moderate
Statemeadow-----	---	---	---	---	0	High
123: Joel-----	---	---	---	---	0	High
Setters-----	Abrupt textural change	8-45	---	Noncemented	0	Moderate
124: Johnson-----	Paralithic bedrock	40-60	---	Moderately cemented	0	Moderate
125: Johnson-----	Paralithic bedrock	40-60	---	Moderately cemented	0	Moderate

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
125: Swayne-----	Abrupt textural change	14-60	---	Noncemented	0	---
126: Johnson-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---
Swayne-----	Abrupt textural change	14-60	---	Noncemented	0	---
127: Johnson-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---
Texascreek-----	Paralithic bedrock	20-40	---	Moderately cemented	0	---
128: Jury-----	---	---	---	---	0	---
129: Jury-----	---	---	---	---	0	---
130: Jury, cold-----	---	---	---	---	0	---
131: Jury-----	---	---	---	---	0	---
Weitas-----	---	---	---	---	0	---
132: Jury-----	---	---	---	---	0	---
Weitas-----	---	---	---	---	0	---
133: Kauder-----	Fragipan	22-40	---	Noncemented	0	---
134: Keeler, dry-----	---	---	---	---	0	---
Keeler-----	---	---	---	---	0	---

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
135: Keeler, moist-----	---	---	---	---	0	---
Keeler-----	---	---	---	---	0	---
136: Keeler-----	---	---	---	---	0	---
Aldermand-----	Strongly contrasting textural stratification	20-55	---	Noncemented	0	---
137: Keeler-----	---	---	---	---	0	---
Jacot-----	---	---	---	---	0	---
138: Keeler-----	---	---	---	---	0	---
Lado-----	---	---	---	---	0	---
139: Kettenbach-----	Lithic bedrock	20-40	---	Indurated	0	---
Gwin-----	Lithic bedrock	10-20	---	Indurated	0	---
Rock outcrop-----	Lithic bedrock	0	---	Indurated	0	---
140: Kettenbach-----	Lithic bedrock	20-40	---	Indurated	0	---
Keuterville-----	---	---	---	---	0	---
141: Keuterville-----	---	---	---	---	0	---
142: Keuterville-----	---	---	---	---	0	---
143: Keuterville-----	---	---	---	---	0	---
Rock outcrop-----	Lithic bedrock	0	---	Indurated	0	---

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
144: Klickson-----	Abrupt textural change	30-50	---	Noncemented	0	Moderate
145: Klickson-----	Abrupt textural change	30-50	---	Noncemented	0	Moderate
146: Klickson-----	Abrupt textural change	30-50	---	Noncemented	0	Moderate
Agatha-----	Lithic bedrock	40-60	---	Indurated	0	Moderate
147: Klickson-----	---	---	---	---	0	Moderate
Kettenbach-----	Lithic bedrock	20-40	---	Indurated	0	Moderate
148: Klickson-----	Abrupt textural change	30-50	---	Noncemented	0	Moderate
Rock outcrop-----	Lithic bedrock	0	---	Indurated	0	---
Kettenbach-----	Lithic bedrock	20-40	---	Indurated	0	Moderate
149: Konkol-----	---	---	---	---	0	Moderate
Revling-----	---	---	---	---	0	High
150: Kooskia-----	Abrupt textural change	6-45	---	Noncemented	0	Moderate
151: Kooskia-----	Abrupt textural change	6-45	---	Noncemented	0	Moderate
152: Kruse-----	---	---	---	---	0	Moderate
153: Kruse-----	---	---	---	---	0	Moderate

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
154: Kruise-----	---	---	---	---	0	Moderate
Aldermand-----	Strongly contrasting textural stratification	20-55	---	Noncemented	0	Moderate
155: Kruise-----	---	---	---	---	0	Moderate
Aldermand-----	Strongly contrasting textural stratification	20-55	---	Noncemented	0	Moderate
156: Kruise-----	---	---	---	---	0	Moderate
McCrosket, dry-----	Paralithic bedrock	40-60	---	Moderately cemented	0	Moderate
157: Kruise-----	---	---	---	---	0	Moderate
Noil-----	Paralithic bedrock	40-60	---	Moderately cemented	0	Moderate
158: Kruise-----	---	---	---	---	0	Moderate
Teakean-----	Fragipan	40-60	19-40	Noncemented	0	Moderate
159: Larkin-----	---	---	---	---	0	High
Driscoll-----	Abrupt textural change	8-45	---	Noncemented	0	Moderate
160: Lebaron-----	---	---	---	---	0	High
Latahco-----	---	---	---	---	0	High



Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
161: Lewhand----- Fragipan		13-19	14-29	Noncemented	0	High
Burntcreek-----	---	---	---	---	0	Moderate
162: Lewhand----- Fragipan		13-19	14-29	Noncemented	0	High
Teneb-----	---	---	---	---	0	High
163: Longbar-----	---	---	---	---	0	Moderate
Bigtalk-----	---	---	---	---	0	Moderate
164: Longbar-----	---	---	---	---	0	Moderate
Bigtalk-----	---	---	---	---	0	Moderate
165: Longpen-----	---	---	---	---	0	High
166: Longpen-----	---	---	---	---	0	High
167: Meland----- Lithic bedrock		20-40	---	Indurated	0	Moderate
Jacket-----	---	---	---	---	0	Moderate
168: Meland----- Lithic bedrock		20-40	---	Indurated	0	Moderate
Keuterville-----	---	---	---	---	0	Moderate
169: Mushel-----	---	---	---	---	0	Moderate
Brodeer-----	---	---	---	---	0	High
170: Mushel-----	---	---	---	---	0	Moderate
Dullaxe-----	---	---	---	---	0	High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
171: Nakarna, high precipitation-----	Paralithic bedrock	40-60	---	Moderately cemented	0 ---	High
172: Nakarna, high precipitation-----	Paralithic bedrock	40-60	---	Moderately cemented	0 ---	High
173: Nakarna-----	Paralithic bedrock	40-60	---	Moderately cemented	0 ---	High
174: Narnett-----	---	---	---	---	0 ---	High
Jury-----	---	---	---	---	0 ---	High
175: Neva-----	---	---	---	---	0 ---	Moderate
176: Newlig-----	---	---	---	---	0 ---	Moderate
177: Noil-----	Paralithic bedrock	40-60	---	Moderately cemented	0 ---	Moderate
Keeler-----	---	---	---	---	0 ---	Moderate
178: Noil-----	Paralithic bedrock	40-60	---	Moderately cemented	0 ---	Moderate
Bouldercreek, warm-----	---	---	---	---	0 ---	High
Rock outcrop-----	Lithic bedrock	0	---	Indurated	0 ---	---
179: Norwidge, moist-----	---	---	---	---	0 ---	High
Threebear, moist-----	Fragipan	20-40	20-46	Noncemented	0 ---	High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
180: Odonnell-----	---	---	---	---	0	---
Grandad-----	---	---	---	---	0	---
181: Odonnell-----	---	---	---	---	0	---
182: Oxyaquic Xerofluvents, occasionally flooded--	---	---	---	---	0	---
Itzee-----	---	---	---	---	0	---
183: Pits, quarry-----	---	---	---	---	---	---
184: Placer-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---
Dowper-----	Paralithic bedrock	60-65	---	Moderately cemented	0	---
Grangemont-----	---	---	---	---	0	---
185: Poorman, dry-----	---	---	---	---	0	---
186: Poorman, dry-----	---	---	---	---	0	---
Poorman-----	---	---	---	---	0	---
187: Poorman-----	---	---	---	---	0	---
Grandad-----	---	---	---	---	0	---
188: Poorman-----	---	---	---	---	0	---
Grandad-----	---	---	---	---	0	---

Table 30.-Soil Features-Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
189: Poorman-----	---	---	---	---	---	Moderate
Grandad, dry-----	---	---	---	---	---	High
190: Poorman-----	---	---	---	---	---	Moderate
Grandad, dry-----	---	---	---	---	---	High
191: Reggear-----	---Fragipan	20-40	46-66	Noncemented	---	High
Kauder-----	---Fragipan	22-40	---	Noncemented	---	High
192: Reggear-----	---Fragipan	20-40	46-66	Noncemented	---	High
Seddow-----	Lithic bedrock	40-60	---	Indurated	---	Moderate
193: Rettig, high elevation	---	---	---	---	---	High
194: Rettig-----	---	---	---	---	---	High
195: Rettig, cold-----	---	---	---	---	---	High
196: Rettig, cool-----	---	---	---	---	---	High
Rettig, dry-----	---	---	---	---	---	High
197: Rettig-----	---	---	---	---	---	High
Grandad-----	---	---	---	---	---	High
198: Rettig, warm, dry-----	---	---	---	---	---	High

Table 30.-Soil Features-Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Initial	Total	
		In	In	In	In	
198: Township-----	Strongly contrasting textural stratification	14-23	---	0	---	High
199: Rettig-----	---	---	---	0	---	High
Township, wet-----	Strongly contrasting textural stratification	14-23	---	0	---	High
Stepoff-----	---	---	---	0	---	High
200: Riswold-----	---	---	---	0	---	High
Cranberry-----	---	---	---	0	---	High
201: Riswold-----	---	---	---	0	---	High
Grangemont-----	---	---	---	0	---	High
202: Rock outcrop-----	Lithic bedrock	0	---	0	---	---
Whiskeycreek-----	Lithic bedrock	10-20	---	0	---	Low
Texascreek, dry-----	Paralithic bedrock	20-40	---	0	---	Moderate
203: Scaler-----	---	---	---	0	---	High
204: Scaler-----	---	---	---	0	---	High
Grandad-----	---	---	---	0	---	High
205: Scaler-----	---	---	---	0	---	High
Grangemont-----	---	---	---	0	---	High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence			Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total	
		In	In		In	In	
206: Scand-----	---	---	---	---	0	---	High
Scaler-----	---	---	---	---	0	---	High
207: Seddw-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate
208: Seddw-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate
209: Seddw-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate
210: Setters-----	Abrupt textural change	8-45	---	Noncemented	0	---	Moderate
211: Shattuck-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---	High
212: Shattuck-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---	High
213: Shattuck, moist-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---	High
214: Shattuck, moist-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---	High
Dworshak, moist-----	---	---	---	---	0	---	High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
215: Shattuck-----	Strongly contrasting textural stratification	14-21	---	Noncemented	0	---
Dworshak-----	---	---	---	---	0	---
216: Sly-----	---	---	---	---	0	---
Wilkins-----	Abrupt textural change	15-30	16-32	Noncemented	0	---
217: Southwick-----	Fragipan	24-38	23-37	Noncemented	0	---
218: Southwick-----	Fragipan	24-38	8-36	Noncemented	0	---
Larkin-----	---	---	---	---	0	---
219: Statemeadow-----	---	---	---	---	0	---
Reggear-----	Fragipan	20-40	46-66	Noncemented	0	---
220: Swayne-----	Abrupt textural change	14-60	---	Noncemented	0	---
221: Taney-----	Fragipan	20-40	---	Noncemented	0	---
222: Taney-----	Fragipan	20-40	---	Noncemented	0	---
Joel-----	---	---	---	---	0	---
223: Taney-----	Fragipan	20-40	---	Noncemented	0	---
McCrosket-----	Paralithic bedrock	40-60	---	Moderately cemented	0	---

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Total	
		In	In		In	
224: Taney-----	Fragipan	20-40	---	Noncemented	0	High
Setters-----	Abrupt textural change	8-45	---	Noncemented	0	Moderate
225: Taney-----	Fragipan	20-40	---	Noncemented	0	High
Setters-----	Abrupt textural change	8-45	---	Noncemented	0	Moderate
226: Teakean-----	Fragipan	40-60	19-40	Noncemented	0	Moderate
227: Teneb-----	---	---	---	---	0	High
228: Texascreek-----	Paralithic bedrock	20-40	---	Moderately cemented	0	Moderate
Rock outcrop-----	Lithic bedrock	0	---	Indurated	0	---
229: Texascreek, dry-----	Paralithic bedrock	20-40	---	Moderately cemented	0	Moderate
Whiskeycreek-----	Lithic bedrock	10-20	---	Indurated	0	Low
230: Norwidge-----	---	---	---	---	0	High
Threebear-----	Fragipan	20-40	20-46	Noncemented	0	High
231: Tomodo-----	Fragipan	20-62	4-42	Noncemented	0	High
232: Tomodo-----	Fragipan	20-62	4-42	Noncemented	0	High
Lado-----	---	---	---	---	0	High



Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence		Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total
		In	In		In	In
233: Township-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
						High
Rettig-----	---	---	---	---	0	---
						High
234: Township-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
						High
Rettig-----	---	---	---	---	0	---
						High
235: Township, dry-----	Strongly contrasting textural stratification	14-23	---	Noncemented	0	---
						High
Rettig-----	---	---	---	---	0	---
						High
236: Trappercreek-----	---	---	---	---	0	---
						High
Narnett-----	---	---	---	Moderately cemented	0	---
						High
237: Uvi-----	---	---	---	---	0	---
						Moderate
238: Uvi-----	---	---	---	---	0	---
						Moderate
239: Vaywood, high precipitation-----	Strongly contrasting textural stratification	14-24	---	Noncemented	0	---
						High

Table 30.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Subsidence			Potential for frost action
	Kind	Depth to top	Thickness	Hardness	Initial	Total	
239: Vaywood, dry-----	Strongly contrasting textural stratification	In 14-24	In ---	Noncemented	In 0	In ---	High
240: Vaywood-----	Strongly contrasting textural stratification	14-24	---	Noncemented	0	---	High
241: Vaywood-----	Strongly contrasting textural stratification	14-24	---	Noncemented	0	---	High
Handoff-----	Strongly contrasting textural stratification	17-30	---	Noncemented	0	---	High
242: Water-----	---	---	---	---	---	---	---
243: Wellsbench-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate
244: Wellsbench-----	Lithic bedrock	40-60	---	Indurated	0	---	Moderate
Lacy-----	Lithic bedrock	10-20	---	Indurated	0	---	Moderate
245: Wilkins-----	Abrupt textural change	15-30	16-32	Noncemented	0	---	Moderate

# Soil Survey of Clearwater Area, Idaho

Table 31.—Taxonomic Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series.)

Soil name	Family or higher taxonomic class
Agatha-----	Loamy-skeletal, isotic, frigid Vitrandic Haploxeralfs
Ahsahka-----	Fine-loamy, mixed, superactive, mesic Typic Argixerolls
Aldermant-----	Coarse-loamy, isotic, frigid Vitrandic Eutrudepts
Aquandic Cryaquepts-----	Aquandic Cryaquepts
Aquandic Dystrudepts-----	Aquandic Dystrudepts
Aquandic Endoaquepts-----	Aquandic Endoaquepts
Bandmill-----	Fine-silty, mixed, superactive, frigid Andic Hapludalfs
Bargamin-----	Ashy over loamy, amorphic over mixed, active, frigid Alfic Udivitrands
Berthahill-----	Medial over loamy-skeletal, amorphic over isotic Typic Haplocryands
Bigtalk-----	Fine-loamy, mixed, superactive, frigid Typic Eutrudepts
Boulder creek-----	Ashy over loamy-skeletal, amorphic over isotic, frigid Typic Udivitrands
Brequito-----	Fine-silty, mixed, superactive, frigid Andic Hapludalfs
Brodeer-----	Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands
Burnt creek-----	Fine-loamy, mixed, active, frigid Vitrandic Hapludolls
Campra-----	Loamy-skeletal, isotic, frigid Vitrandic Hapludalfs
Carlinton-----	Fine-silty, mixed, superactive, frigid Vitrandic Fragixeralfs
Casey creek-----	Coarse-loamy, mixed, superactive, frigid Vitrandic Eutrudepts
Cavendish-----	Fine-loamy, mixed, superactive, frigid Ultic Haploxeralfs
Cobbler-----	Coarse-loamy, isotic, frigid Vitrandic Haploxerepts
Cranberry-----	Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands
*Crumarine-----	Coarse-loamy, mixed, active, frigid Aquic Dystroxerepts
Dowper-----	Ashy over loamy, amorphic over isotic, frigid Alfic Udivitrands
Driscoll-----	Fine, smectitic, mesic Ultic Palexerolls
Dullaxe-----	Ashy over loamy, amorphic over isotic, frigid Typic Udivitrands
Dworshak-----	Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands
Elkberry-----	Medial over loamy, amorphic over mixed, superactive, frigid Alfic   Udivitrands
Elkridge-----	Loamy-skeletal, isotic, frigid Andic Hapludalfs
Fico-----	Medial over loamy, amorphic over isotic Typic Vitricryands
Flewsie-----	Ashy over loamy, amorphic over isotic, frigid Typic Udivitrands
Floodwood-----	Fine-loamy, isotic, frigid Andic Hapludalfs
Flumecreek-----	Ashy over loamy-skeletal, amorphic over isotic, frigid Ultic Udivitrands
Ford creek-----	Fine-loamy, mixed, superactive, mesic Ultic Haploxeralfs
Garveson-----	Ashy over sandy or sandy-skeletal, amorphic over isotic, frigid Typic   Udivitrands
Gramil-----	Very-fine, kaolinitic, frigid Vitrandic Hapludalfs
Grandad-----	Ashy over loamy, amorphic over paramicaceous, frigid Alfic Udivitrands
Grangemont-----	Fine-silty, mixed, active, frigid Andic Glossudalfs
Grasshopper-----	Fine-loamy, mixed, active, frigid Aquandic Endoaqualfs
Grice-----	Loamy, mixed, dysic Terric Cryohemists
Gwin-----	Loamy-skeletal, mixed, superactive, mesic Lithic Argixerolls
Handoff-----	Medial over loamy-skeletal, glassy over isotic Vitric Fulvicryands
Hildebrand-----	Fine-loamy, mixed, active, frigid Andic Hapludalfs
Hubub-----	Ashy over loamy, amorphic over mixed, active, frigid Alfic Udivitrands
Hucberit-----	Medial over loamy, amorphic over isotic Typic Haplocryands
Hugus-----	Ashy over loamy-skeletal, amorphic over isotic, frigid Alfic Udivitrands
Itzee-----	Sandy, mixed, mesic Cumulic Ultic Haploxerolls
*Jacket-----	Fine, montmorillonitic, mesic Pachic Ultic Argixerolls
Jacket-----	Fine, smectitic, mesic Pachic Ultic Argixerolls
Jacot-----	Ashy over loamy, amorphic over isotic, frigid Alfic Udivitrands
Jaype-----	Fine-loamy, mixed, active, frigid Andic Hapludalfs
Joel-----	Fine-silty, mixed, superactive, frigid Alfic Argixerolls
Johnson-----	Fine-loamy, mixed, superactive, frigid Ultic Argixerolls
Judgetown-----	Ashy over loamy, amorphic over isotic, frigid Typic Udivitrands
Jury-----	Medial over loamy, amorphic over isotic, frigid Typic Udivitrands
Kauder-----	Fine-silty, mixed, active, frigid Andic Fragiudalfs
Keeler-----	Fine-loamy, mixed, superactive, frigid Vitrandic Hapludalfs
Kettenbach-----	Loamy-skeletal, mixed, superactive, mesic Pachic Argixerolls
Keuterville-----	Loamy-skeletal, mixed, superactive, mesic Ultic Argixerolls
Klickson-----	Loamy-skeletal, isotic, frigid Vitrandic Argixerolls
Konkol-----	Fine-loamy, mixed, active, frigid Andic Hapludalfs

# Soil Survey of Clearwater Area, Idaho

Table 31.—Taxonomic Classification of the Soils—Continued

Soil name	Family or higher taxonomic class
Kooskia-----	Fine, smectitic, mesic Xeric Argialbolls
Kruse-----	Fine-loamy, isotic, frigid Vitrandic Haploxeralfs
Lacy-----	Loamy-skeletal, mixed, superactive, mesic Lithic Ultic Argixerolls
Lado-----	Medial over loamy, amorphic over mixed, active, frigid Alfic Udivitrands
Larkin-----	Fine-silty, mixed, superactive, mesic Ultic Argixerolls
Latahco-----	Fine-silty, mixed, superactive, frigid Argiaquic Xeric Argialbolls
Lebaron-----	Fine-silty, mixed, superactive, frigid Aquandic Palexeralfs
Lewhand-----	Fine-silty, mixed, active, frigid Vitrandic Fragiudalfs
Longbar-----	Fine-loamy, mixed, superactive, frigid Typic Hapludolls
Longpen-----	Fine-silty, mixed, superactive, frigid Vitrandic Haploxeralfs
Lostpete-----	Medial over loamy, amorphic over mixed, active, frigid Alfic Udivitrands
Marblecreek-----	Loamy-skeletal, isotic, frigid Andic Dystrudepts
McCrosket-----	Loamy-skeletal, mixed, superactive, mesic Ultic Haploxerolls
Meland-----	Fine-loamy, mixed, superactive, mesic Ultic Argixerolls
Mushel-----	Coarse-loamy, isotic, frigid Andic Hapludalfs
Nakarna-----	Ashy over loamy, amorphic over paramicaceous, frigid Typic Udivitrands
Nakarna-----	Ashy over loamy, amorphic over micaceous, frigid Typic Udivitrands
Narnett-----	Fine-silty, mixed, active Andic Haplocryalfs
Neva-----	Fine-loamy, isotic, frigid Andic Haploxeralfs
Newlig-----	Fine-loamy, mixed, superactive, mesic Pachic Ultic Argixerolls
Noil-----	Loamy-skeletal, isotic, frigid Vitrandic Haploxerepts
Norwidge-----	Medial over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands
Odonnell-----	Medial over loamy, amorphic over mixed, active, frigid Alfic Udivitrands
Oxyaquic Xerofluvents---	Oxyaquic Xerofluvents
Placer-----	Fine-loamy, isotic, frigid Vitrandic Hapludalfs
Poorman-----	Coarse-loamy, paramicaceous, frigid Andic Hapludalfs
Reggear-----	Fine-silty, mixed, active, frigid Vitrandic Fraglossudalfs
Rettig-----	Ashy over loamy, amorphic over paramicaceous, frigid Typic Udivitrands
Revling-----	Ashy over loamy, amorphic over mixed, active, frigid Alfic Udivitrands
Riswold-----	Fine-silty, mixed, superactive, frigid Andic Hapludalfs
Scaler-----	Fine-silty, mixed, superactive, frigid Andic Hapludalfs
Scand-----	Ashy over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands
Seddow-----	Fine-loamy, mixed, superactive, frigid Vitrandic Haploxeralfs
Setters-----	Fine, smectitic, frigid Ultic Palexerolls
Shattuck-----	Ashy over loamy-skeletal, amorphic over isotic, frigid Ultic Udivitrands
Sly-----	Fine-loamy, mixed, superactive, frigid Vitrandic Hapludalfs
Southwick-----	Fine-silty, mixed, superactive, mesic Oxyaquic Argixerolls
Spacecreek-----	Medial over loamy, amorphic over isotic, frigid Oxyaquic Udivitrands
Statemeadow-----	Fine-silty, mixed, active, frigid Vitrandic Hapludalfs
Stepoff-----	Medial over loamy, amorphic over isotic, frigid Typic Udivitrands
Swayne-----	Fine, smectitic, frigid Ultic Palexeralfs
Taney-----	Fine-silty, mixed, superactive, frigid Vitrandic Argixerolls
Teakean-----	Fine-loamy, mixed, superactive, frigid Vitrandic Palexeralfs
Teneb-----	Fine-silty, mixed, active, frigid Aquandic Epiaqualfs
Texascreek-----	Coarse-loamy, mixed, superactive, mesic Ultic Haploxerolls
Threebear-----	Medial over loamy, amorphic over mixed, superactive, frigid Alfic Udivitrands
Tomodo-----	Ashy over loamy, amorphic over isotic, frigid Alfic Udivitrands
Township-----	Ashy over loamy-skeletal, amorphic over paramicaceous, frigid Typic Udivitrands
Trappercreek-----	Medial over loamy, amorphic over mixed, active Typic Haplocryands
Uvi-----	Fine-loamy, isotic, frigid Vitrandic Haploxerepts
Vaywood-----	Medial over loamy-skeletal, amorphic over isotic Typic Haplocryands
Weitas-----	Medial over loamy, glassy over isotic Vitric Fulvicryands
Wellsbench-----	Clayey-skeletal, smectitic, mesic Pachic Ultic Argixerolls
Whiskeycreek-----	Sandy, mixed, mesic Lithic Ultic Haploxerolls
Wilkins-----	Fine, smectitic, frigid Xerertic Argialbolls



# Accessibility Statement

---

This document is not accessible by screen-reader software. The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at 1-800-457-3642 or by e-mail at [ServiceDesk-FTC@ftc.usda.gov](mailto:ServiceDesk-FTC@ftc.usda.gov). For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at <http://offices.sc.egov.usda.gov/locator/app>.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

# **Soil Survey of Clearwater Area, Idaho**

CD-ROM Version 2011

Welcome! This CD contains information about the soils of Clearwater Area, Idaho. Click on a subject of interest or browse the CD to view the files.

## **Soil Survey Manuscript**

This document contains general information about the survey area, the general and detailed soil map unit descriptions, the taxonomic unit descriptions, and the soil interpretation and soil properties tables.

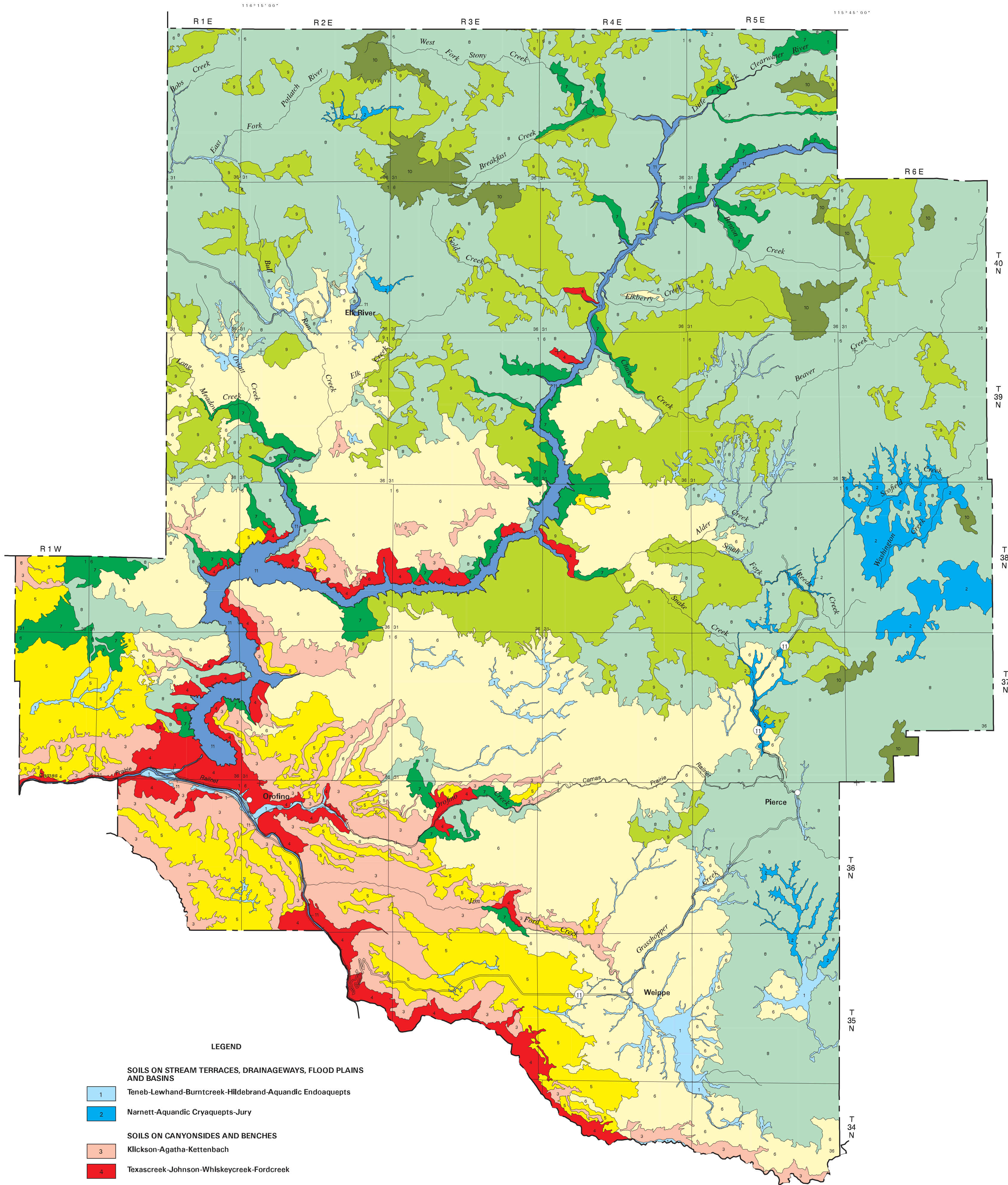
## **General Soil Map**

The general soil map shows the survey area divided into groups of associated soils called [general soil map units](#). This map is useful for planning the use and management of large areas. Click on the general soil map unit names in the legend to view the map unit descriptions.

## **Detailed Soil Maps**

The detailed soil maps can be useful in planning the use and management of small areas. From the Index to Map Sheets, click on any quadrangle to view the soil delineations and map unit symbols in the survey area. For instructions on printing the maps, [click here](#). For instructions on split-screen viewing, [click here](#).





LEGEND

SOILS ON STREAM TERRACES, DRAINAGEWAYS, FLOOD PLAINS AND BASINS

- 1 Teneb-Lewhand-Burntcreek-Hildebrand-Aquandic Endoaquepts
- 2 Narnett-Aquandic Cryaquepts-Jury

SOILS ON CANYONSIDES AND BENCHES

- 3 Klickson-Agatha-Kettenbach
- 4 Texascreek-Johnson-Whiskeycreek-Fordcreek

SOILS DOMINANTLY ON BASALT PLATEAUS

- 5 Taney-Carlinton
- 6 Grangemont-Kauder-Riswold

SOILS ON MOUNTAINS

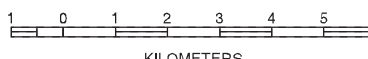
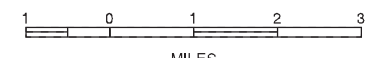
- 7 Kruse-Noil-Uvi
- 8 Brodeer-Dullaxe-Mushel-Boulder creek
- 9 Grandad-Rettig-Township
- 10 Vaywood-Berthahill-Hucberit

- 11 Water

SECTIONALIZED TOWNSHIP					
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

UNITED STATES DEPARTMENT OF AGRICULTURE,  
NATURAL RESOURCES CONSERVATION SERVICE AND FOREST SERVICE  
UNITED STATES DEPARTMENT OF THE INTERIOR,  
BUREAU OF LAND MANAGEMENT  
UNIVERSITY OF IDAHO, COLLEGE OF AGRICULTURE  
IDAHO SOIL CONSERVATION COMMISSION

GENERAL SOIL MAP  
CLEARWATER AREA, IDAHO



SCALE = 1:145000

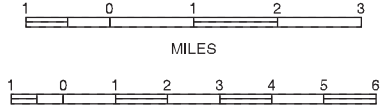
Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.





SECTIONALIZED TOWNSHIP				
6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19	20	21	22	23
30	29	28	27	26
31	32	33	34	35

INDEX TO MAP SHEETS  
CLEARWATER AREA, IDAHO



SCALE = 1:145000





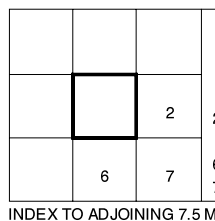
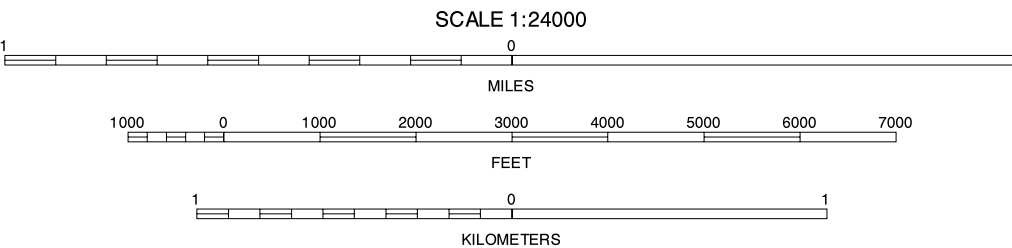
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION

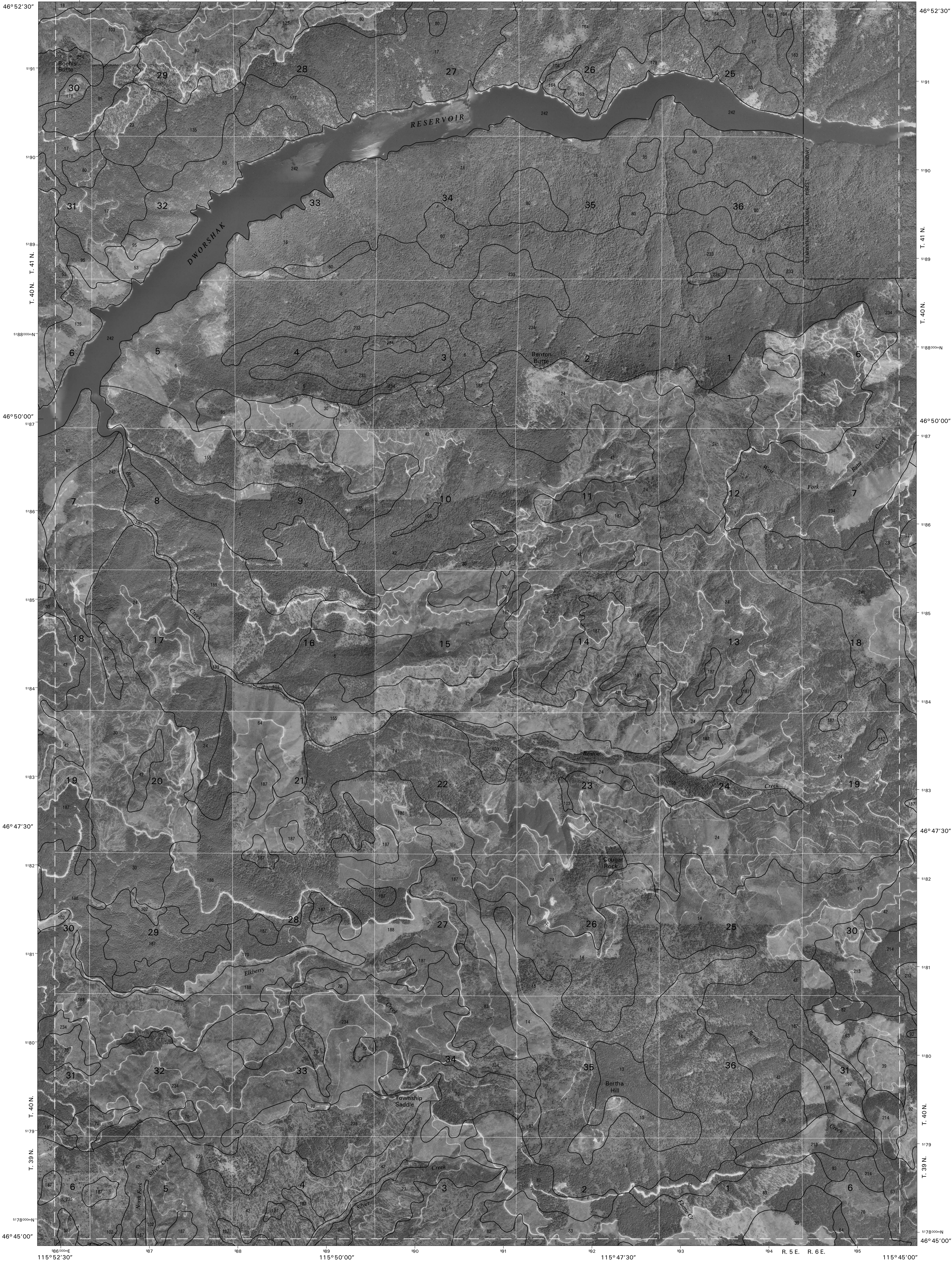


2 ANTHONY PEAK  
6 MCGARY BUTTE  
7 ELK RIVER

BECHTEL BUTTE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 1 OF 36

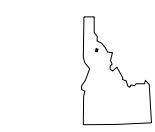
Soil map delineations extending beyond the dashed white quadrangle neoline are for reference only and are included on adjacent map sheets.



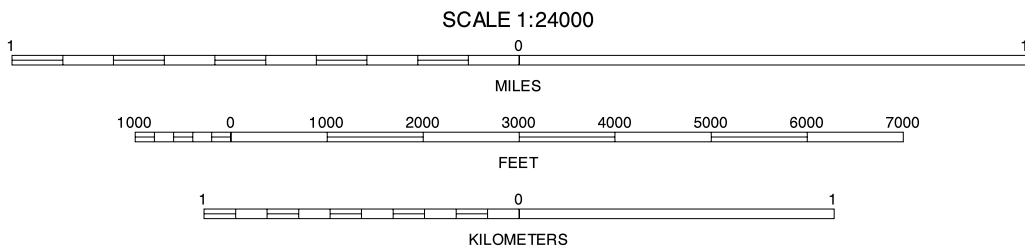


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



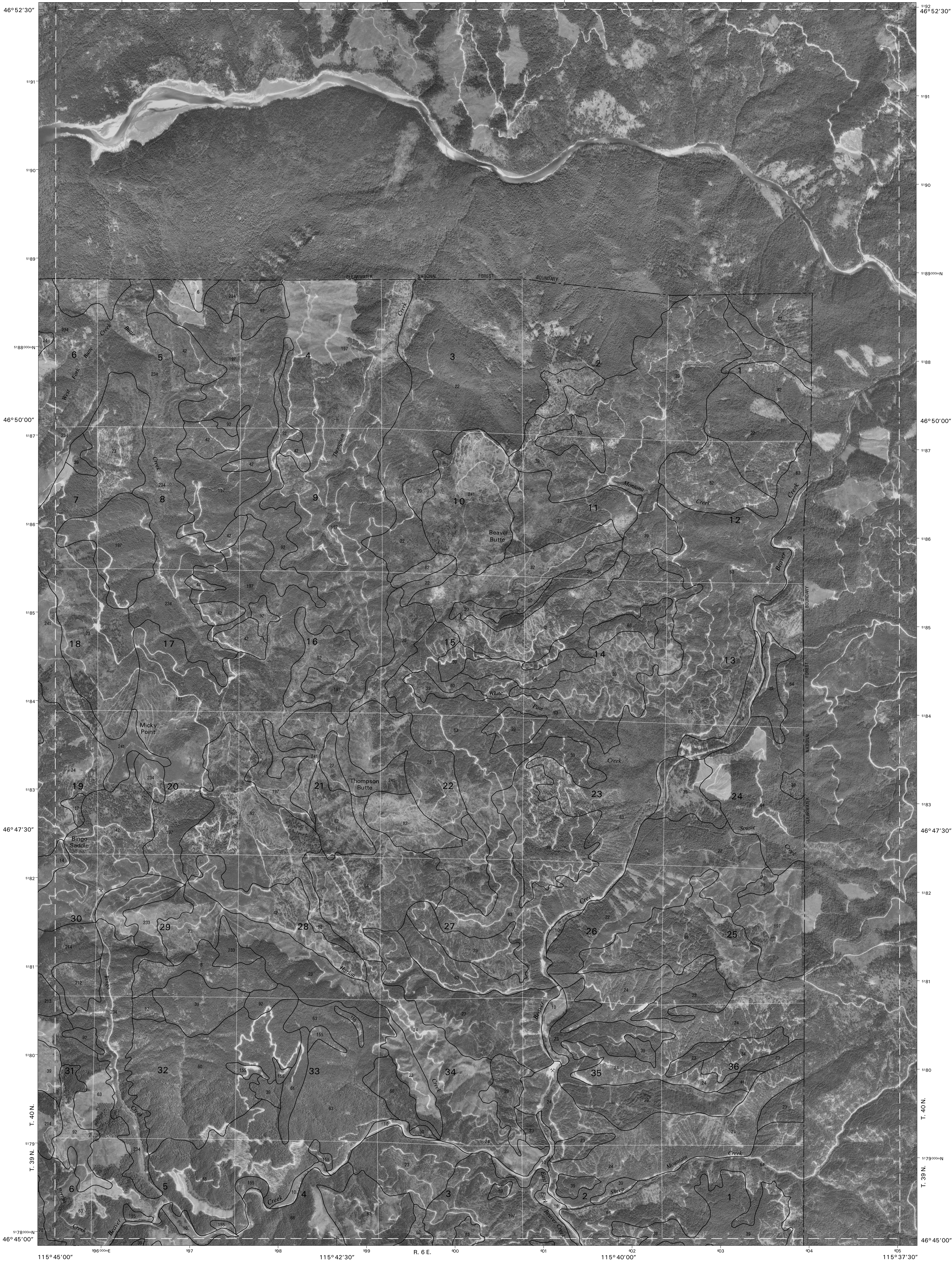
4	5		4 PINCHOT BUTTE
9		11	5 LITTLE GOAT MOUNTAINS
16	17	18	9 TOWNSHIP BUTTE
			11 THOMPSON POINT
			16 JOHN LEWIS MOUNTAIN
			17 HEADQUARTERS
			18 BROWNS ROCK

INDEX TO ADJOINING 7.5 MAPS

BERTHA HILL, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 10 OF 36

Soil map delineations extending beyond the dashed white quadrangle nealines are for reference only and are included on adjacent map sheets.





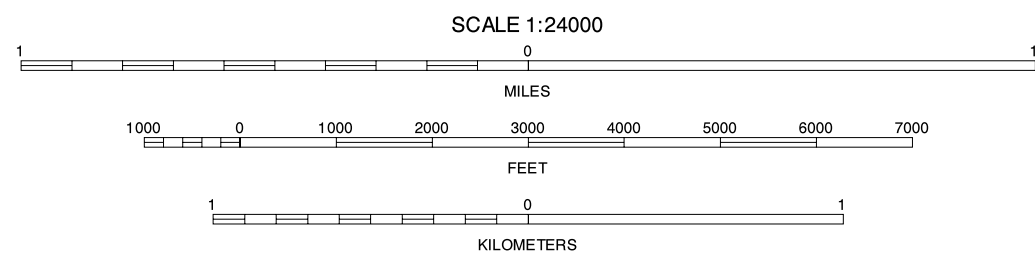
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks, Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



5		5	LITTLE GOAT MOUNTAINS
10		10	BERTHA HILL
17	18	17	HEADQUARTERS
		18	BROWNS ROCK

INDEX TO ADJOINING 7.5 MAPS

THOMPSON POINT, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 11 OF 36

Soil map delineations extending beyond the dashed white quadrangle headline are for reference only and are included on adjacent map sheets.

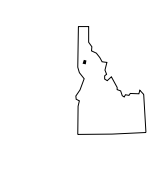




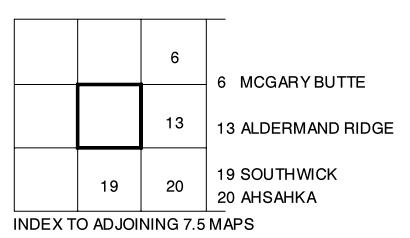
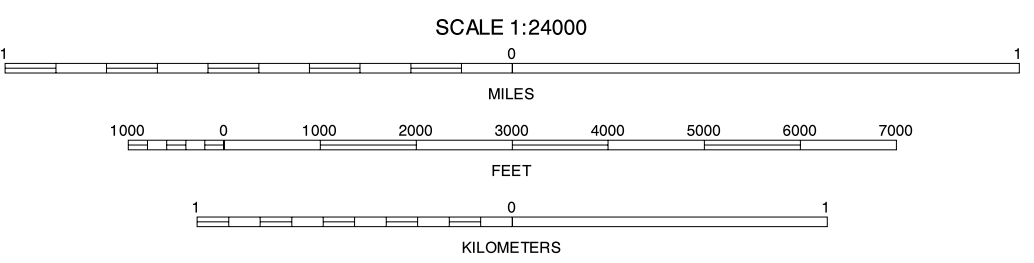
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



PARK, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 12 OF 36

Soil map delineations extending beyond the dashed white quadrangle neartine are for reference only and are included on adjacent map sheets.

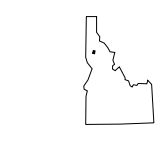




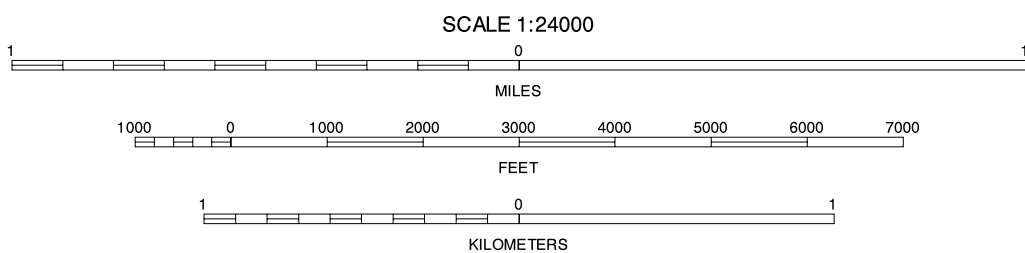
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



	6	7	8 MCGARY BUTTE
			7 ELK RIVER
12		14	12 PARK
			14 ELK CREEK FALLS
			19 SOUTHWICK
19	20	21	20 ANSAWKA
			21 DENT

INDEX TO ADJOINING 7.5 MAPS

ALDERMAND RIDGE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 13 OF 36

Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets.

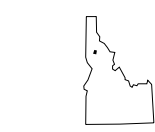




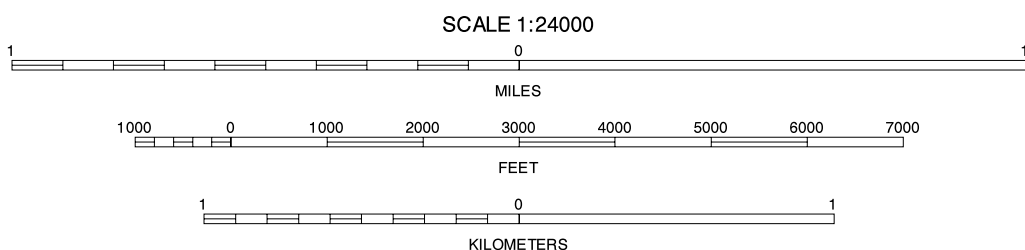
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



6	7	8	6 MCGARY BUTTE
13		15	7 ELK RIVER
20	21	22	8 ELK BUTTE
			13 ALDERMAND RIDGE
			15 LITTLE GREEN MOUNTAIN
			20 AHSAHKA
			21 DENT
			22 GRANGEMONT

INDEX TO ADJOINING 7.5 MAPS

ELK CREEK FALLS, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 14 OF 36

Soil map delineations extending beyond the dashed white quadrangle nealline are for reference only and are included on adjacent map sheets.



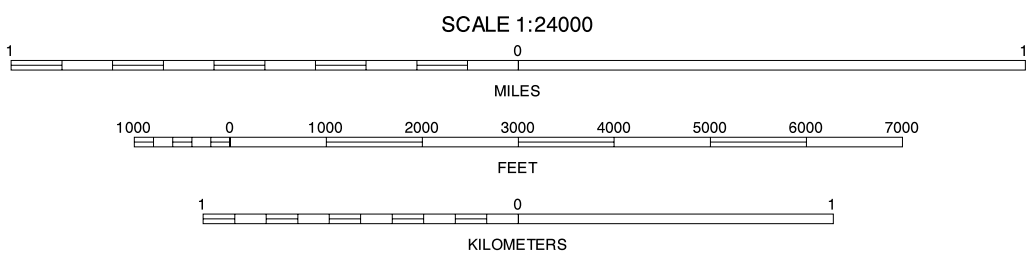


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



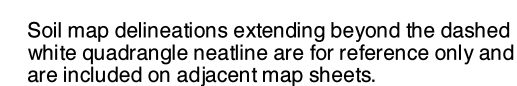
7	8	9	7 ELK RIVER
14		16	8 ELK BUTTE
			9 TOWNSHIP BUTTE
			14 ELK CREEK FALLS
			16 JOHN LEWIS MOUNTAIN
21	22	23	21 DENT
			22 GRANDEMONT
			23 WHISKEY BUTTE

INDEX TO ADJOINING 7.5 MAPS

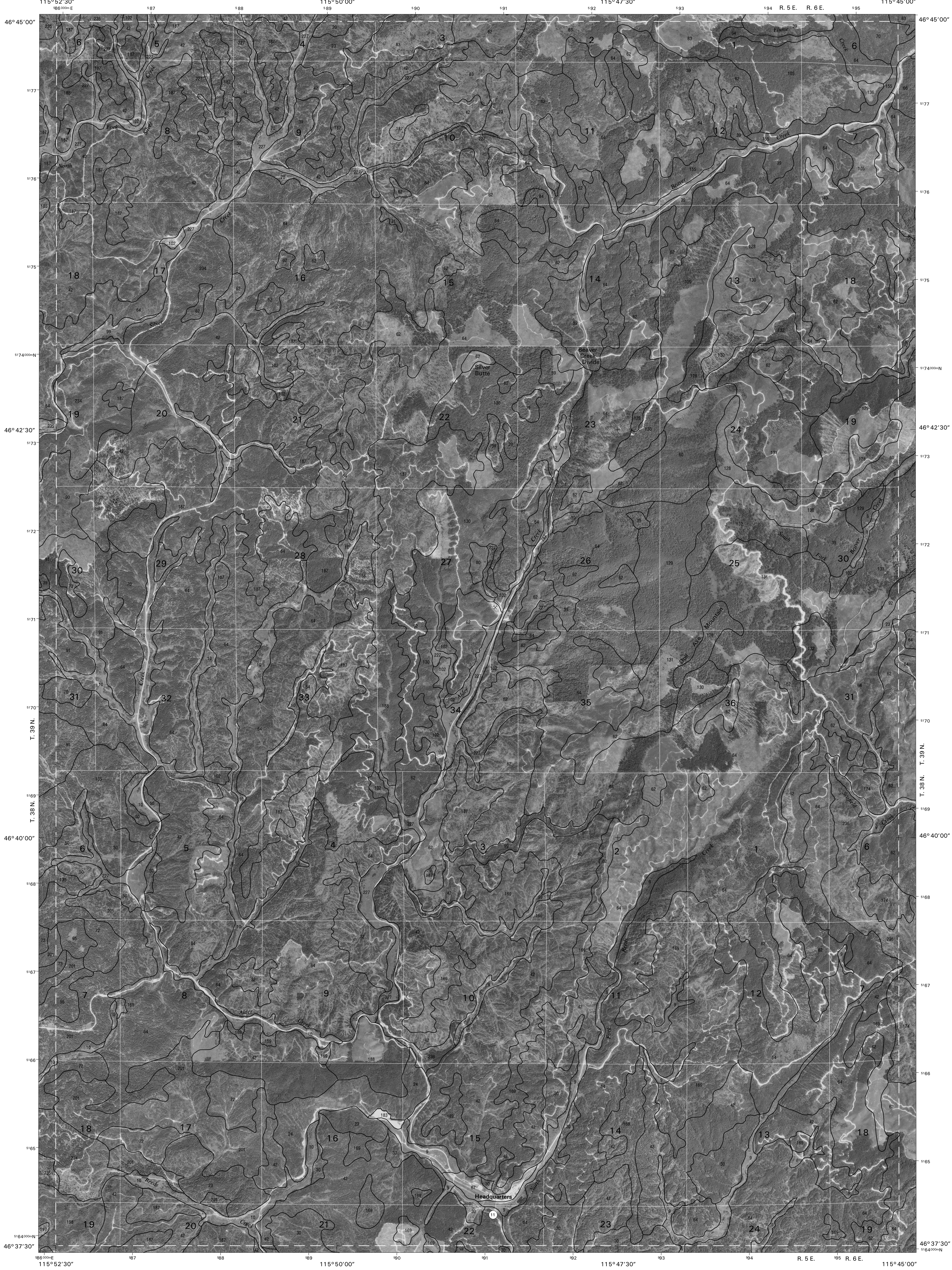
LITTLE GREEN MOUNTAIN, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 15 OF 36

Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets.



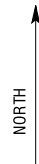




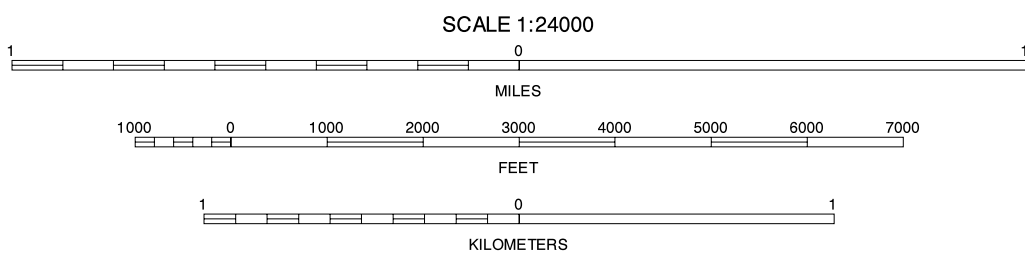


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



9	10	11	9 TOWNSHIP BUTTE
16		18	10 BERTHA HILL
23	24	25	11 THOMPSON POINT
			16 JOHN LEWIS MOUNTAIN
			18 BROWNS ROCK
			23 WHISKEY BUTTE
			24 JAYPE
			25 FRENCH MOUNTAIN

INDEX TO ADJOINING 7.5 MAPS

HEADQUARTERS, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 17 OF 36

Soil map delineations extending beyond the dashed white quadrangle nealline are for reference only and are included on adjacent map sheets.

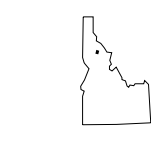




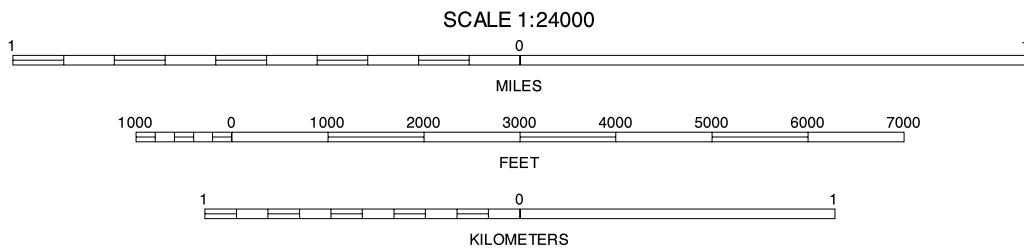
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



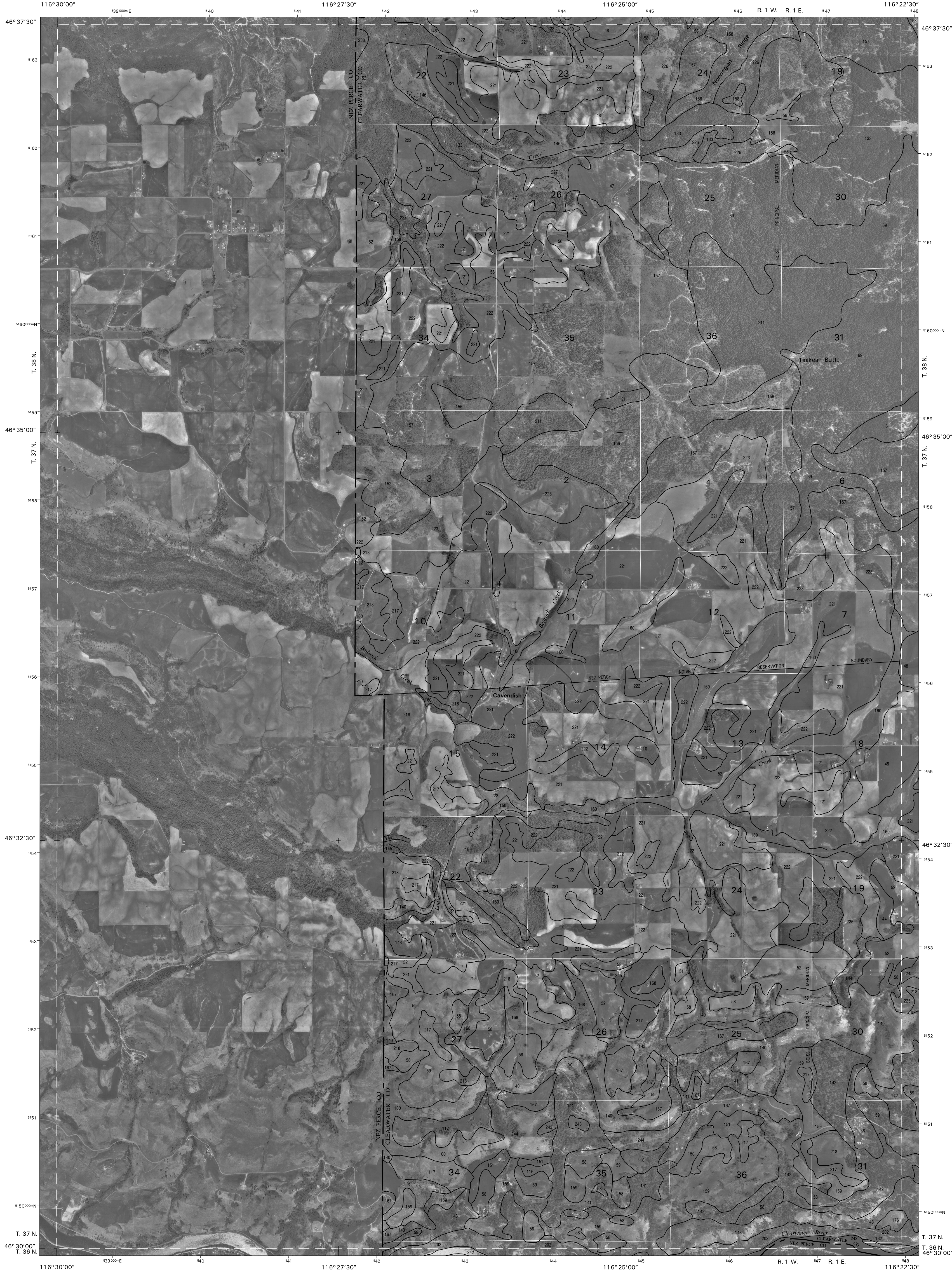
10	11	10 BERTHA HILL
		11 THOMPSON POINT
17		17 HEADQUARTERS
		24 JAYPE
24	25	25 FRENCH MOUNTAIN

INDEX TO ADJOINING 7.5 MAPS

BROWNS ROCK, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 18 OF 36

Soil map delineations extending beyond the dashed white quadrangle headline are for reference only and are included on adjacent map sheets.

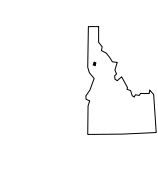




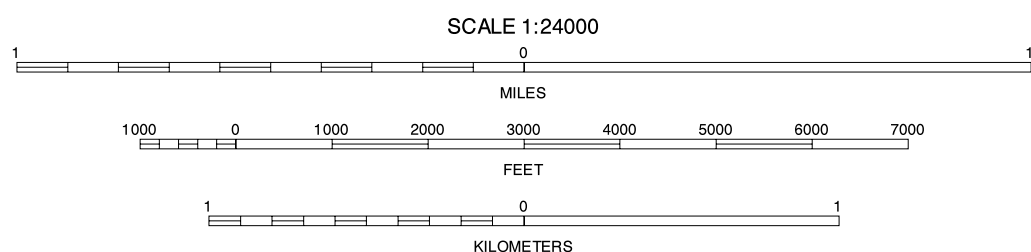
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



12	13	12 PARK
		13 ALDERMAN RIDGE
	20	20 AHSAHKA
26	27	26 PECK
		27 OROFINO WEST

INDEX TO ADJOINING 7.5 MAPS

SOUTHWICK, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 19 OF 36

Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets.





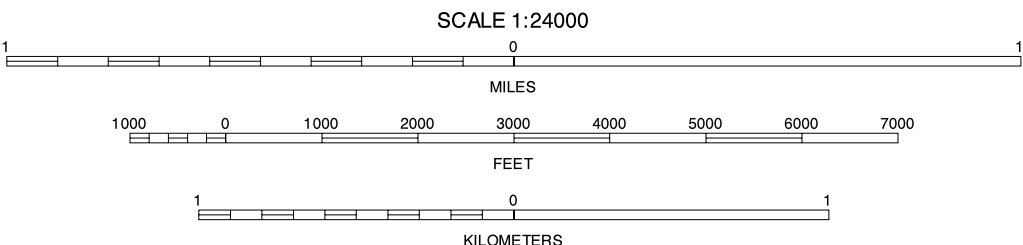
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



1	3
6	8

1 BECHTEL BUTTE  
3 GRICE RIDGE  
6 MCGARY BUTTE  
7 ELK RIVER  
8 ELK BUTTE

INDEX TO ADJOINING 7.5 MAPS

ANTHONY PEAK, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 2 OF 36

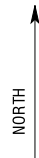
Soil map delineations extending beyond the dashed white quadrangle nealines are for reference only and are included on adjacent map sheets.



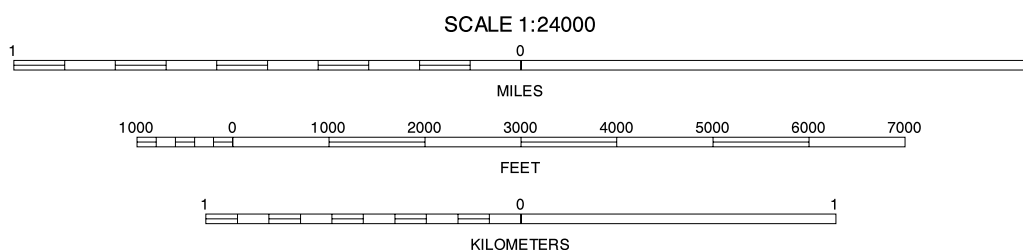


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS) from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public Land Survey System (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



12	13	14	12 PARK
19	20	21	13 ALDERMAN RIDGE
26	27	28	14 ELK CREEK FALLS
			19 SOUTHWICK
			21 DENT
			26 PECK
			27 OROFINO WEST
			28 OROFINO EAST

INDEX TO ADJOINING 7.5 MAPS

AHSAHKA, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 20 OF 36

Soil map delineations extending beyond the dashed white quadrangle neeline are for reference only and are included on adjacent map sheets.

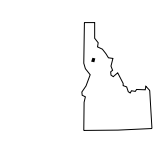




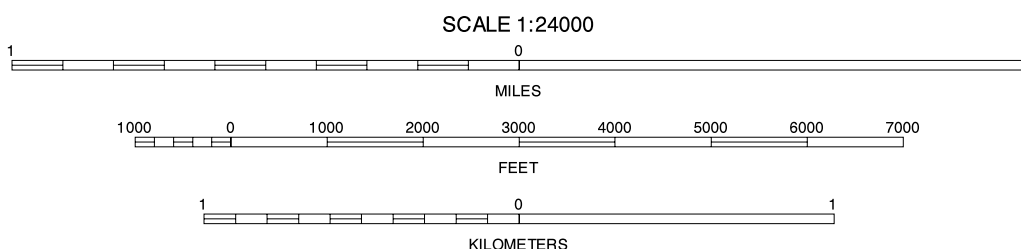
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



13	14	15	13 ALDERMAN RIDGE
20		22	14 ELK CREEK FALLS
27	28	29	15 LITTLE GREEN MOUNTAIN
			20 AHSAHKA
			22 GRANGEMONT
			27 OROFINO WEST
			28 OROFINO EAST
			29 RUDDO

INDEX TO ADJOINING 7.5 MAPS

DENT, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 21 OF 36

Soil map delineations extending beyond the dashed white quadrangle headline are for reference only and are included on adjacent map sheets.



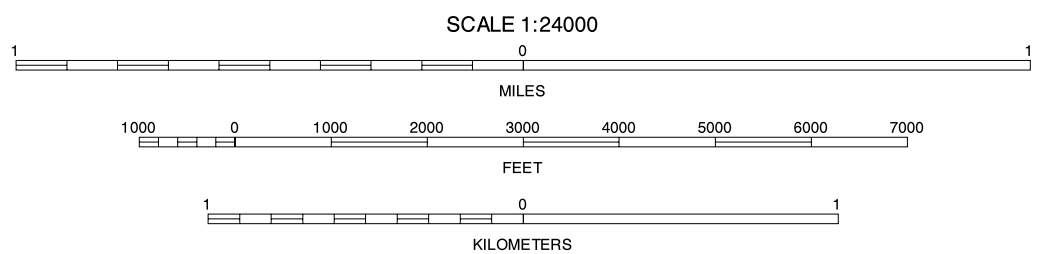


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



14	15	16	14 ELK CREEK FALLS
			15 LITTLE GREEN MOUNTAIN
			16 JOHN LEWIS MOUNTAIN
21		23	21 DENT
			23 WHISKEY BUTTE
			28 OHOFINO EAST
28	29	30	29 RUDDO
			30 WEIPPE NORTH

INDEX TO ADJOINING 7.5 MAPS

GRANGEMENT, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 22 OF 36

Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.



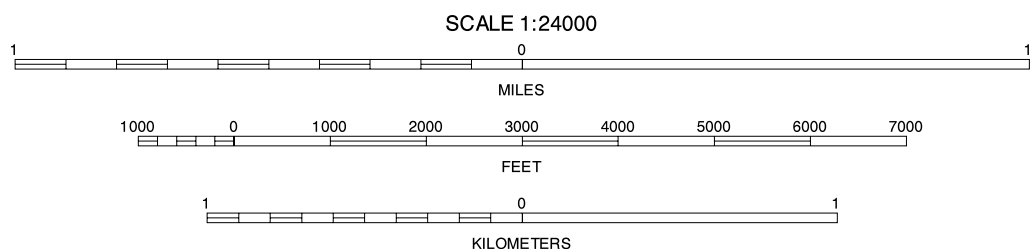


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



15	16	17	15 LITTLE GREEN MOUNTAIN
22	23	24	16 JOHN LEWIS MOUNTAIN
29	30	31	17 HEADQUARTERS
			22 GRANDEMONT
			24 JAYNE
			28 RUDO
			30 WEEPIE NORTH
			31 PIERCE

INDEX TO ADJOINING 7.5 MAPS

WHISKEY BUTTE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 23 OF 36

Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets.





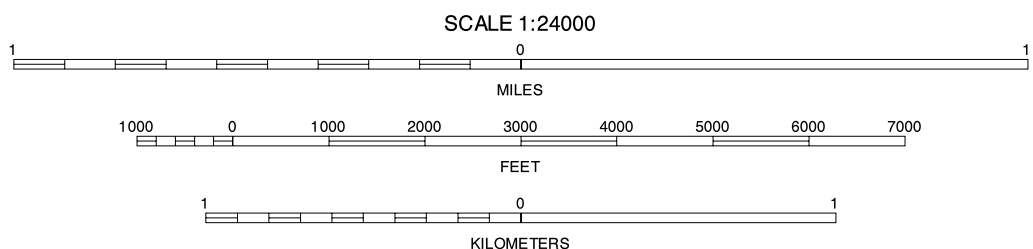
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS) from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



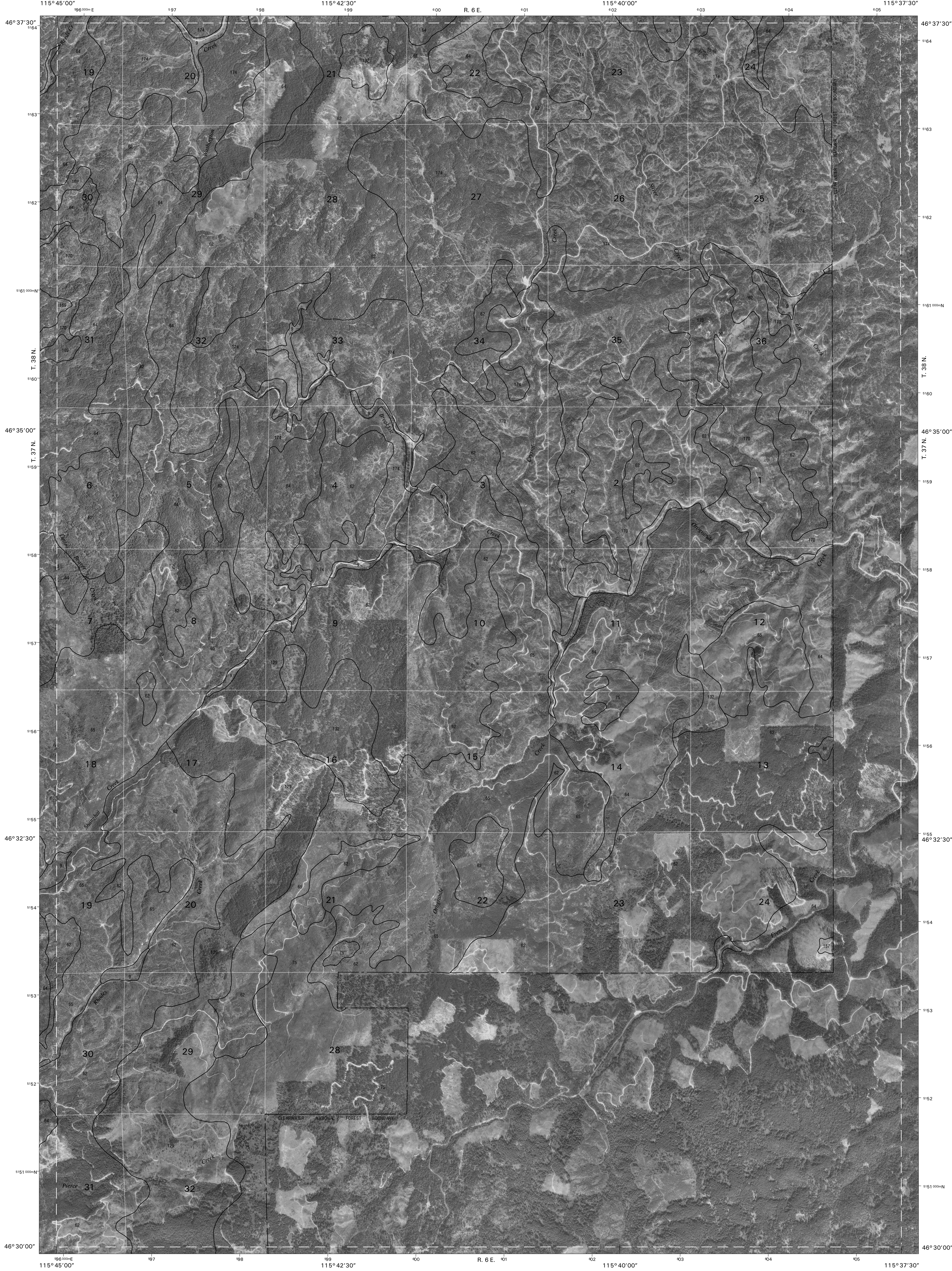
16	17	18	16 JOHN LEWIS MOUNTAIN
23		25	17 HEADQUARTERS
30	31	32	18 BROWNS ROCK
			23 WHISKEY BUTTE
			25 FRENCH MOUNTAIN
			30 WEIPPE NORTH
			31 PIERCE
			32 HEMLOCK BUTTE

INDEX TO ADJOINING 7.5 MAPS

JAYPE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 24 OF 36

Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets.



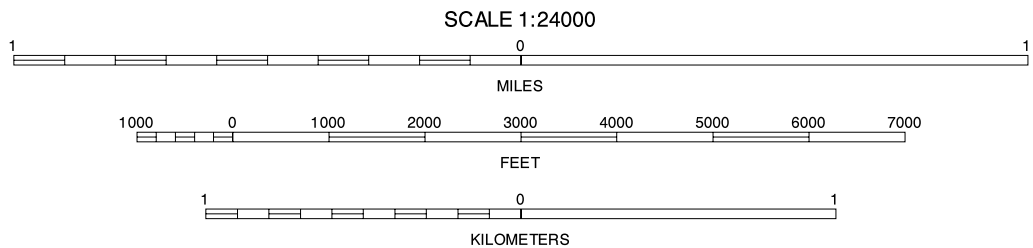


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS) from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



17	18	17 HEADQUARTERS
24		18 BROWNS ROCK
		24 JAYPE
31	32	31 PIERCE
		32 HEMLOCK BUTTE

INDEX TO ADJOINING 7.5 MAPS

FRENCH MOUNTAIN, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 25 OF 36

Soil map delineations extending beyond the dashed white quadrangle neeline are for reference only and are included on adjacent map sheets.

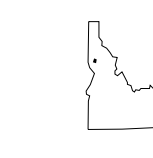




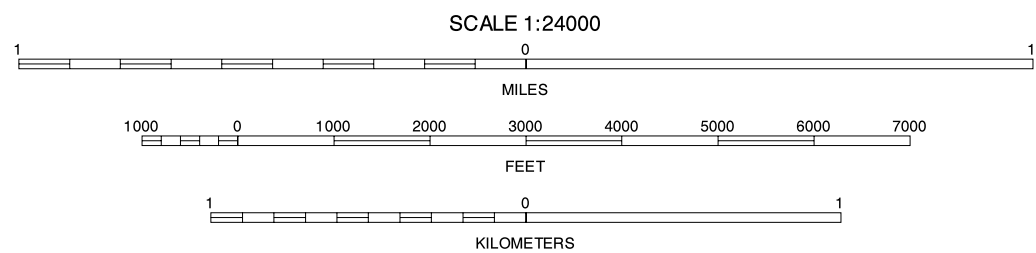
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



19	20	19 SOUTHWICK
		20 AHSABKA
	27	27 OROFINO WEST

INDEX TO ADJOINING 7.5 MAPS

PECK, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 26 OF 36

Soil map delineations extending beyond the dashed white quadrangle neartine are for reference only and are included on adjacent map sheets.

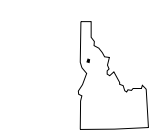




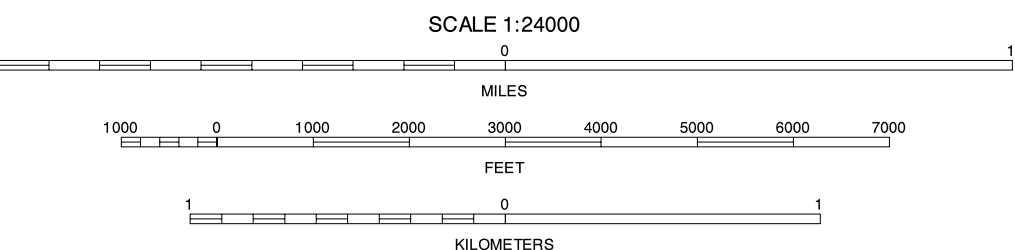
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS) from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



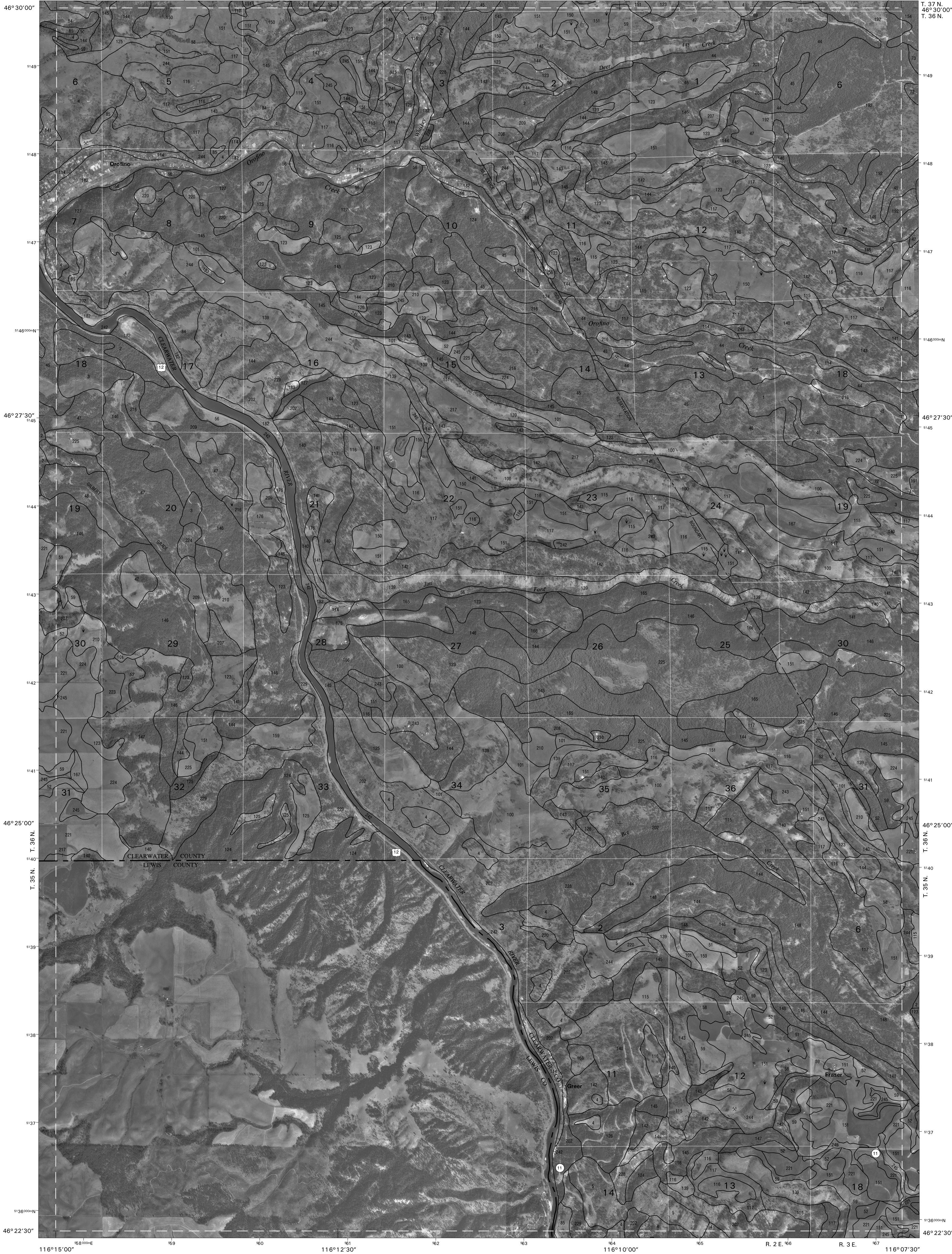
19	20	21	19 SOUTHWICK
			20 AHSARKA
26		28	21 DENT
			26 PECK
			28 OROFINO EAST
		33	33 SIXMILE CREEK

INDEX TO ADJOINING 7.5 MAPS

OROFINO WEST, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 27 OF 36

Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets.

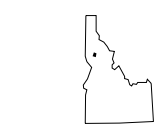




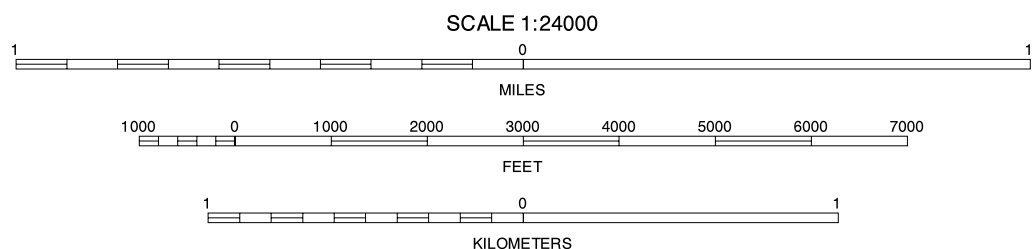
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS) from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



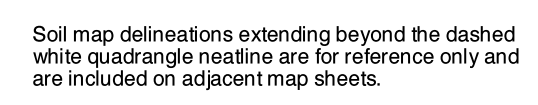
20	21	22	20 AHSARKA
			21 DENT
			22 GRAYMONT
27		29	27 OROFINO WEST
			29 RUDO
	33	34	33 SIXMILE CREEK
			34 WOODLAND

INDEX TO ADJOINING 7.5 MAPS

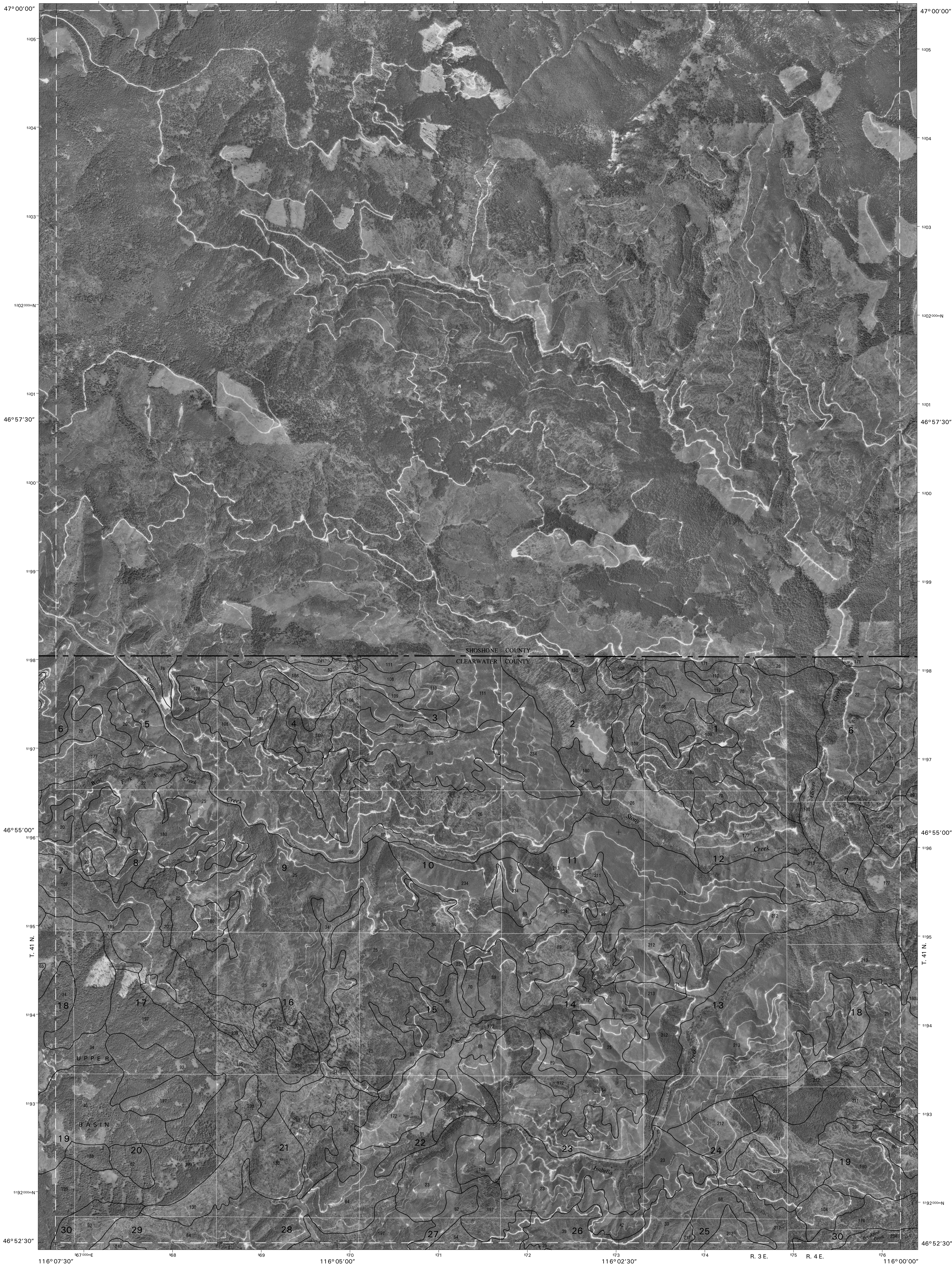
OROFINO EAST, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 28 OF 36

Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.









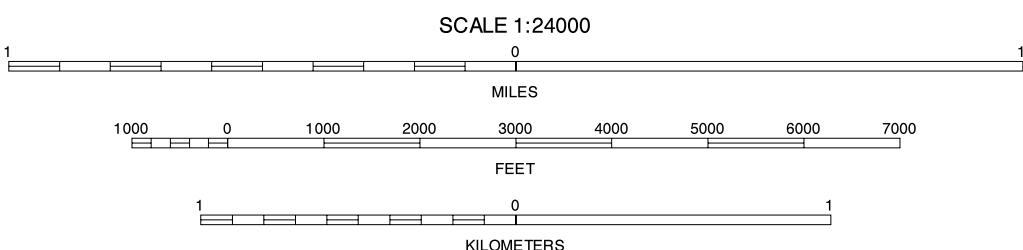
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



2	4
7	9

2 ANTHONY PEAK  
4 PINCHOT BUTTE  
7 ELK RIVER  
8 ELK BUTTE  
9 TOWNSHIP BUTTE  
INDEX TO ADJOINING 7.5 MAPS

GRICE RIDGE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 3 OF 36

Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.

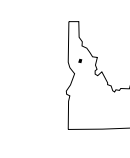




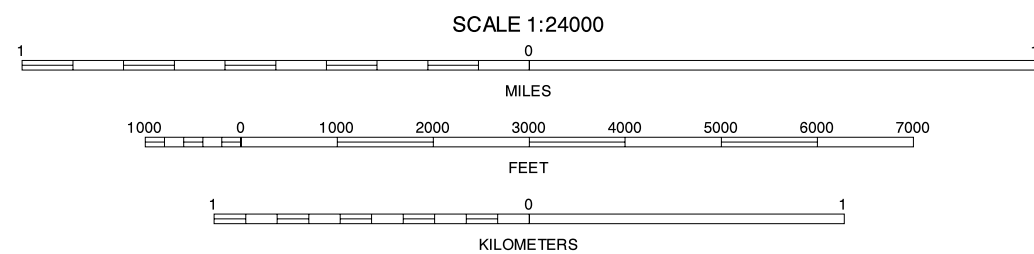
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



22	23	24	22 GRANGEMONT
29		31	23 WHISKEY BUTTE
34	35	36	24 JAVIER
			29 RUDO
			31 PIERCE
			34 WOODLAND
			35 WEIPPE SOUTH
			36 BROWN CREEK RIDGE

INDEX TO ADJOINING 7.5 MAPS

WEIPPE NORTH, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 30 OF 36

Soil map delineations extending beyond the dashed white quadrangle neoline are for reference only and are included on adjacent map sheets.





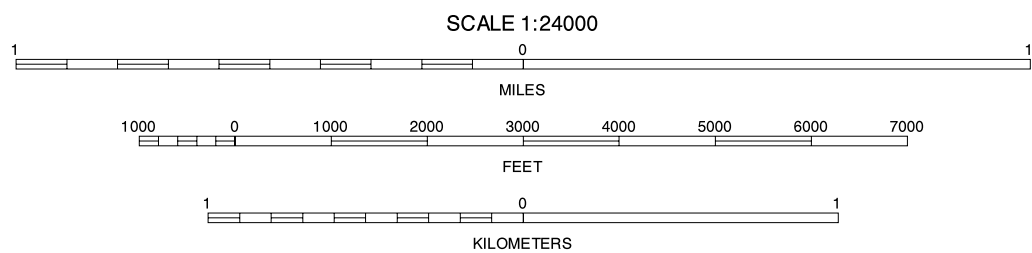
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS) from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



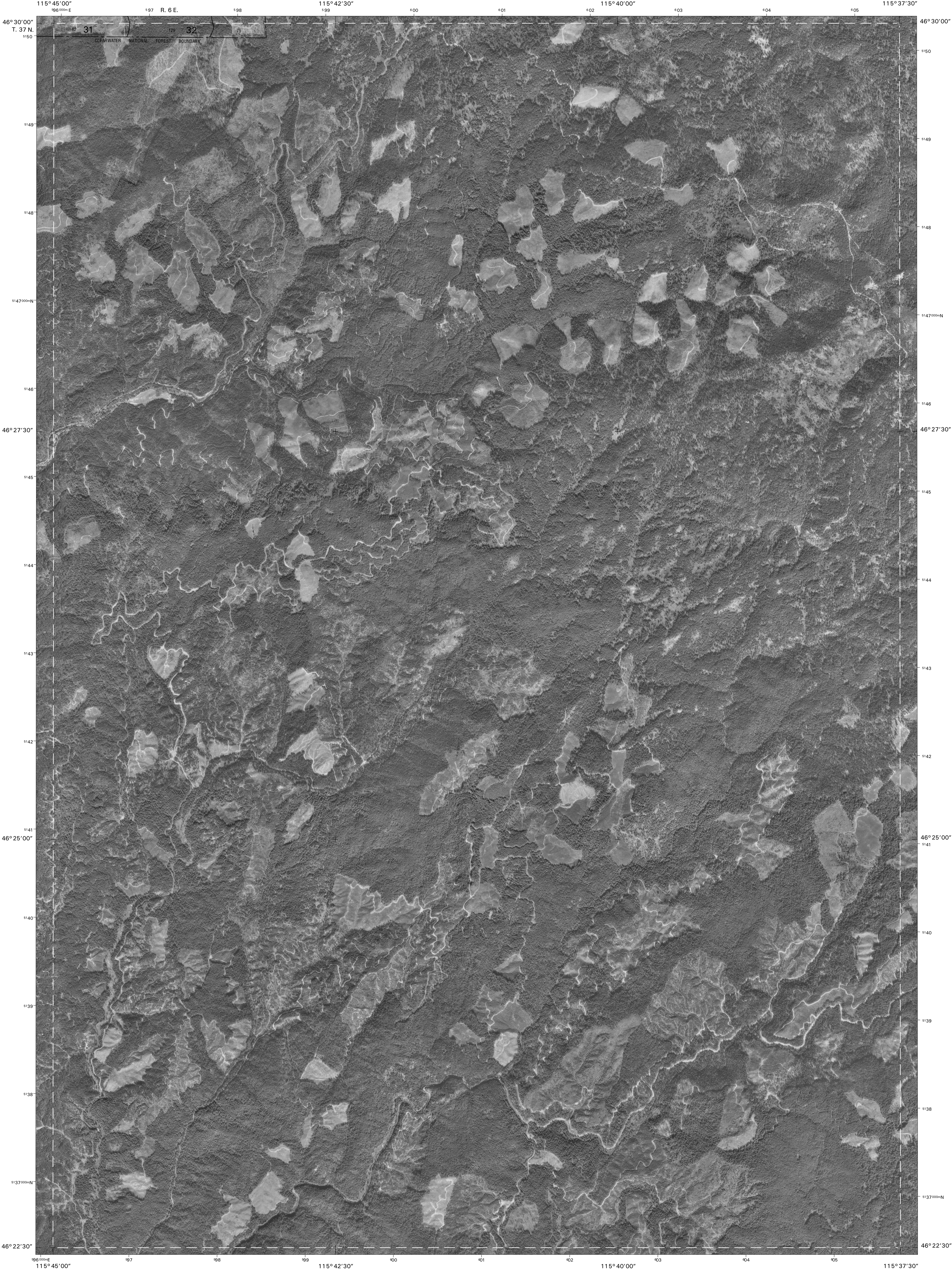
23	24	25	23 WHISKEY BUTTE
30	31	32	24 JAYPE
35	36	37	25 FRENCH MOUNTAIN
			30 WEIPPE NORTH
			32 HEMLOCK BUTTE
			35 WEIPPE SOUTH
			36 BROWN CREEK RIDGE

INDEX TO ADJOINING 7.5 MAPS

PIERCE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 31 OF 36

Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.



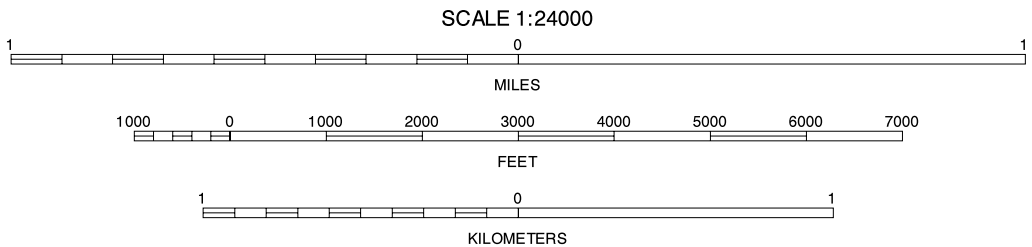


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



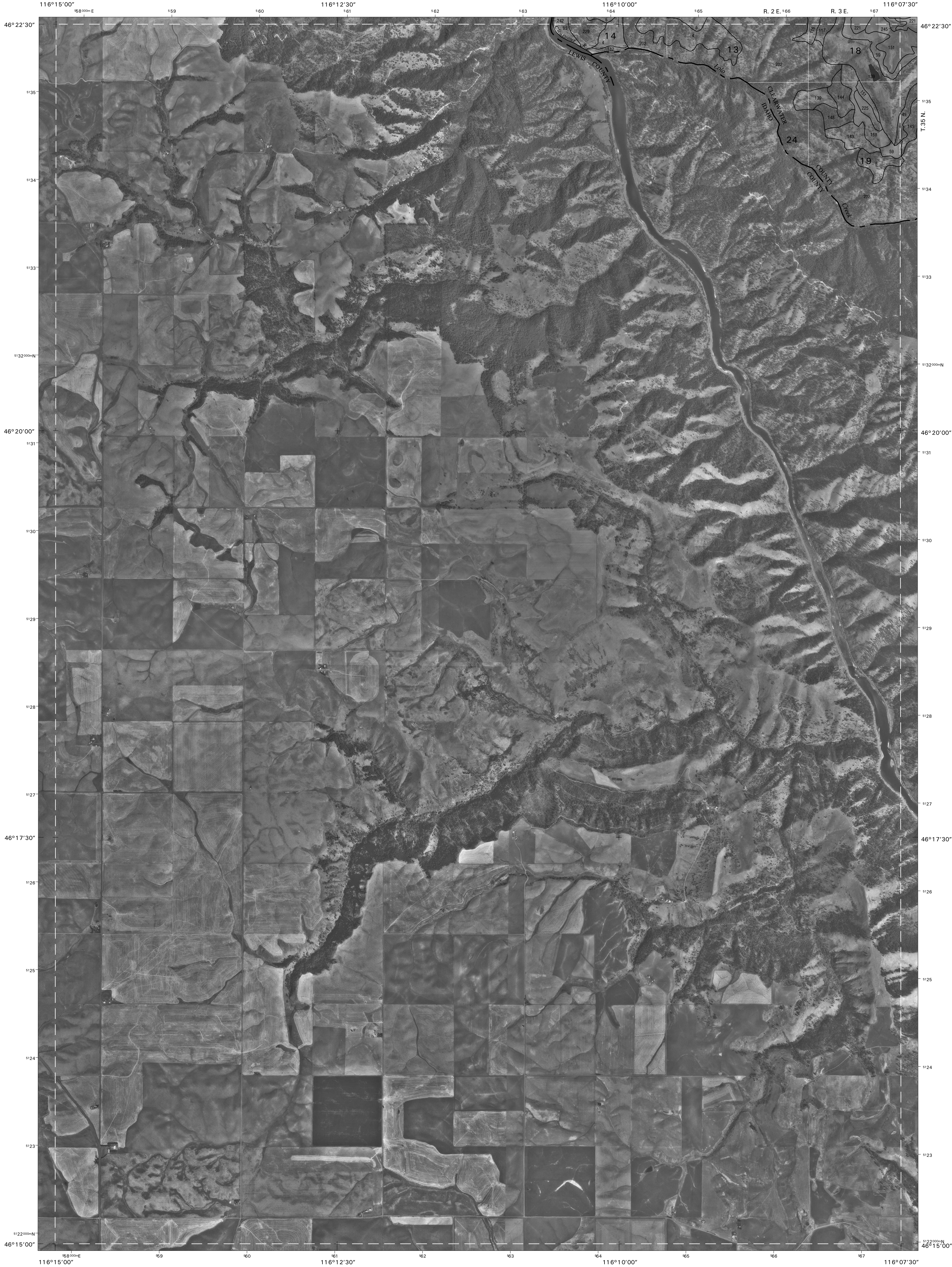
24	25	24 JAYPE 25 FRENCH MOUNTAIN
31		31 PIERCE
36		36 BROWN CREEK RIDGE

INDEX TO ADJOINING 7.5 MAPS

HEMLOCK BUTTE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 32 OF 36

Soil map delineations extending beyond the dashed white quadrangle nealline are for reference only and are included on adjacent map sheets.



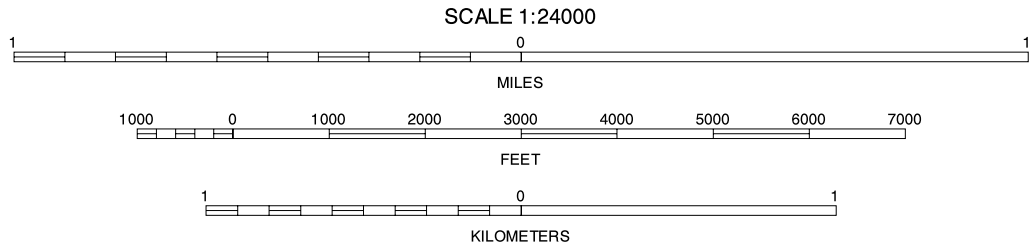


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



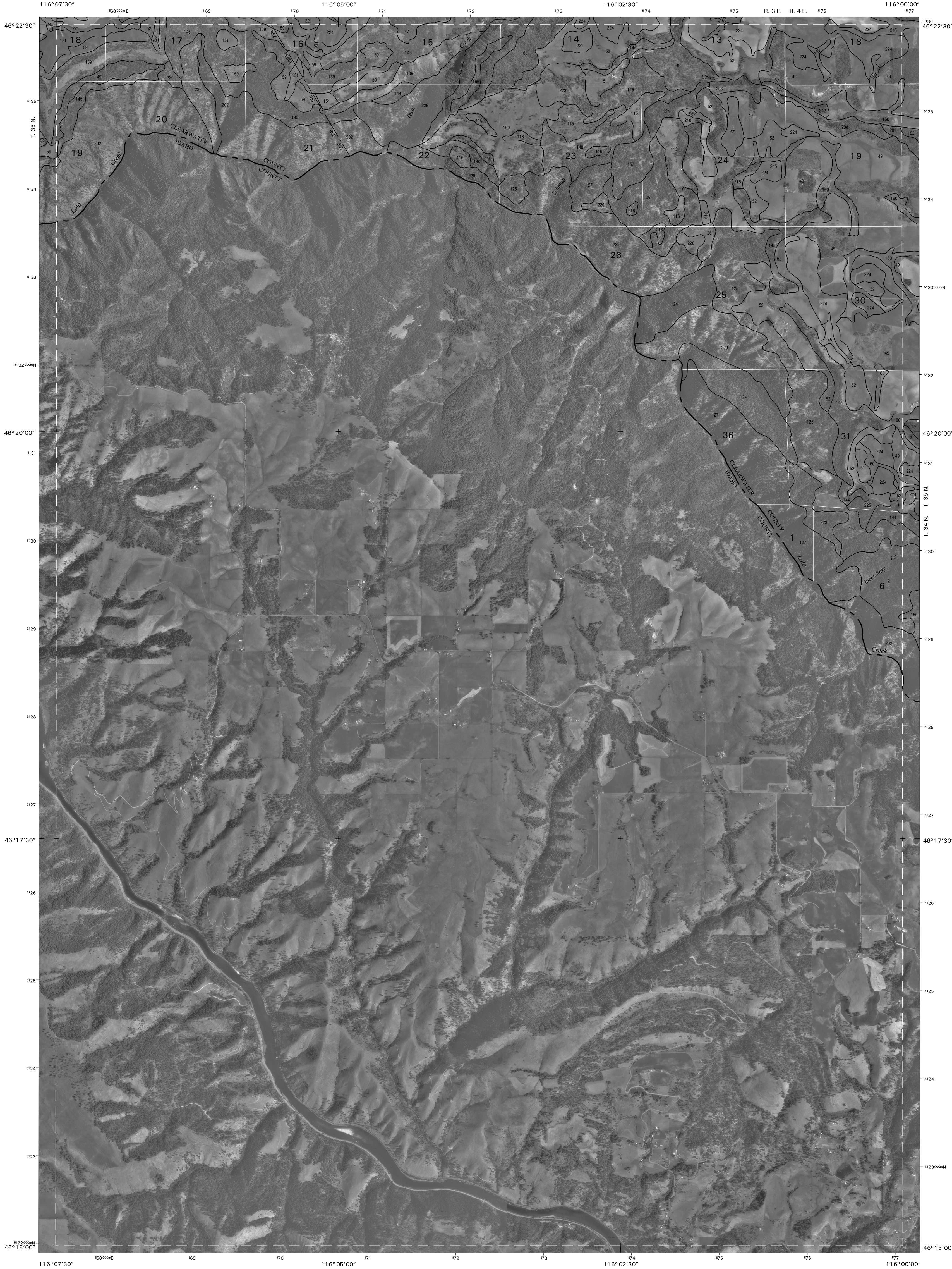
27	28	29	27 OROFINO WEST
			28 OROFINO EAST
			29 RUDDO
		34	34 WOODLAND

INDEX TO ADJOINING 7.5 MAPS

SIXMILE CREEK, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 33 OF 36

Soil map delineations extending beyond the dashed white quadrangle nealines are for reference only and are included on adjacent map sheets.





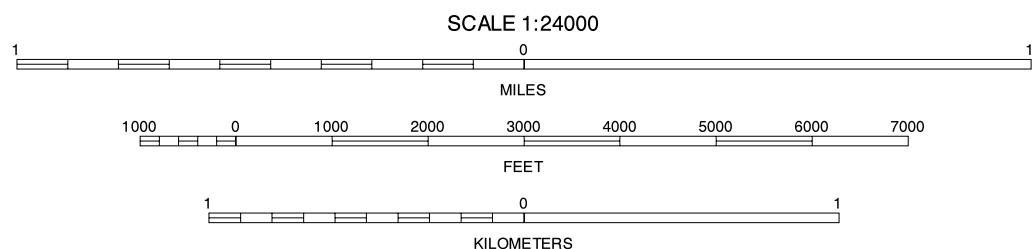
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS) from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



28	29	30	28 OROFINO EAST
			29 HUDO
33		35	30 WEIPPE NORTH
			33 SIXMILE CREEK
			35 WEIPPE SOUTH

INDEX TO ADJOINING 7.5-MINUTE MAPS

WOODLAND, IDAHO  
7.5-MINUTE SERIES  
SHEET NUMBER 34 OF 36

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

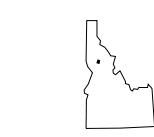




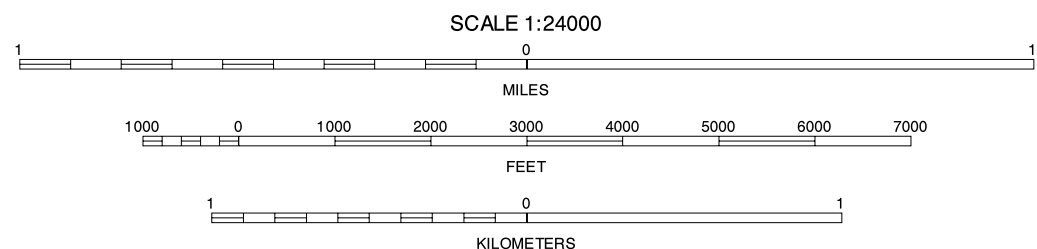
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



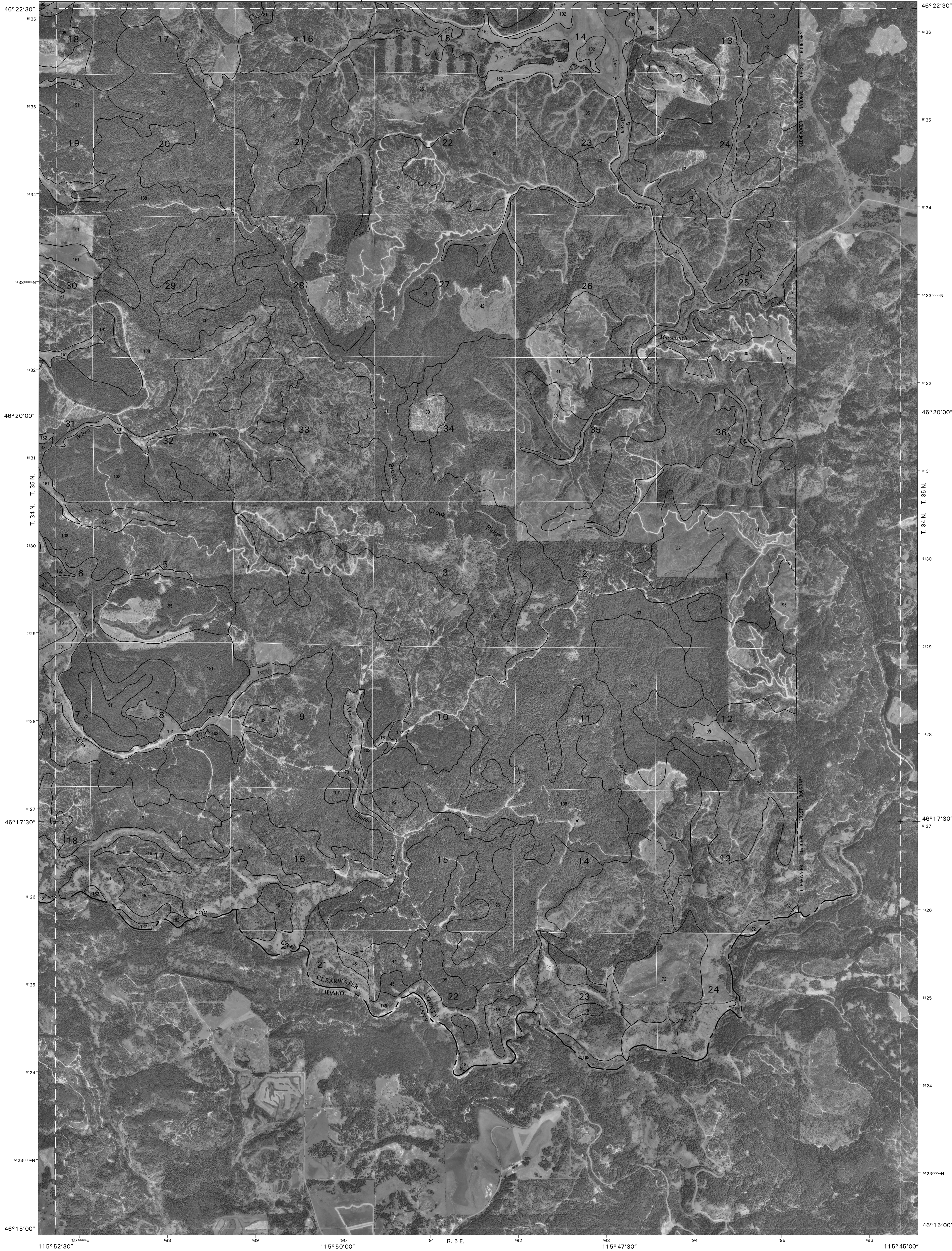
29	30	31	29 RUDO
			30 WEIPPE NORTH
34		36	31 PIERCE
			34 WOOLAND
			36 BROWN CREEK RIDGE

INDEX TO ADJOINING 7.5 MAPS

WEIPPE SOUTH, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 35 OF 36

Soil map delineations extending beyond the dashed white quadrangle neatlne are for reference only and are included on adjacent map sheets.

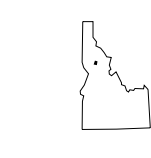




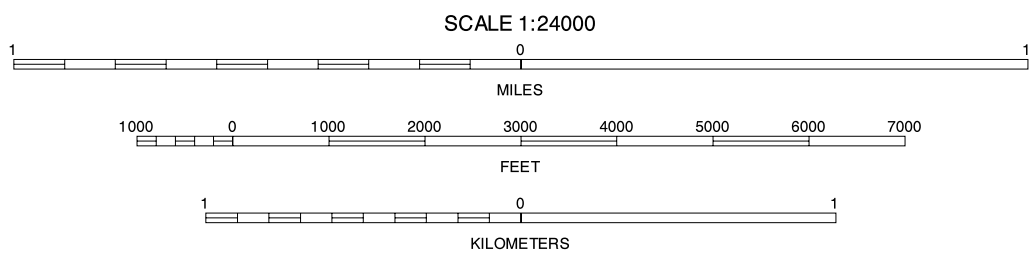
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS, Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



30	31	32	30 WEIPPE NORTH
			31 PIERCE
			32 HEMLOCK BUTTE
			35 WEIPPE SOUTH
35			

INDEX TO ADJOINING 7.5 MAPS

BROWN CREEK RIDGE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 36 OF 36

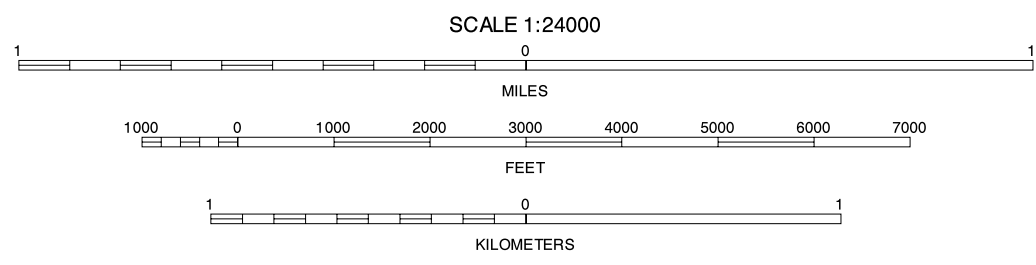
Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.





This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



3	4	5
8	9	10

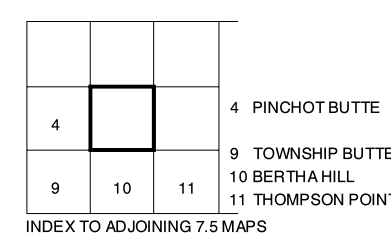
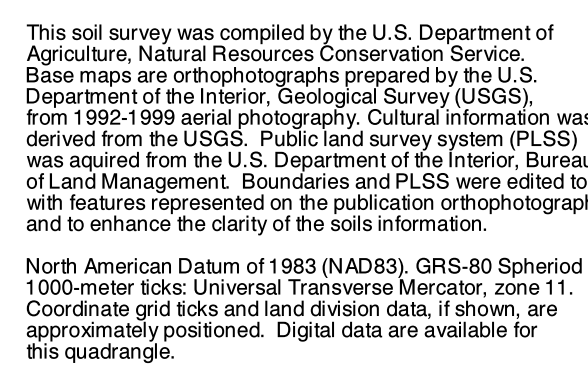
INDEX TO ADJOINING 7.5 MAPS

3 GRICE RIDGE  
5 LITTLE GOAT MOUNTAINS  
8 ELK BUTTE  
9 TOWNSHIP BUTTE  
10 BERTHA HILL

PINCHOT BUTTE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 4 OF 36

Soil map delineations extending beyond the dashed white quadrangle neartline are for reference only and are included on adjacent map sheets.





Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.





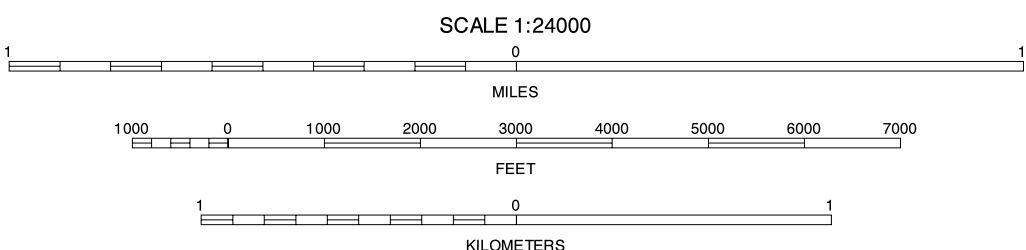
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



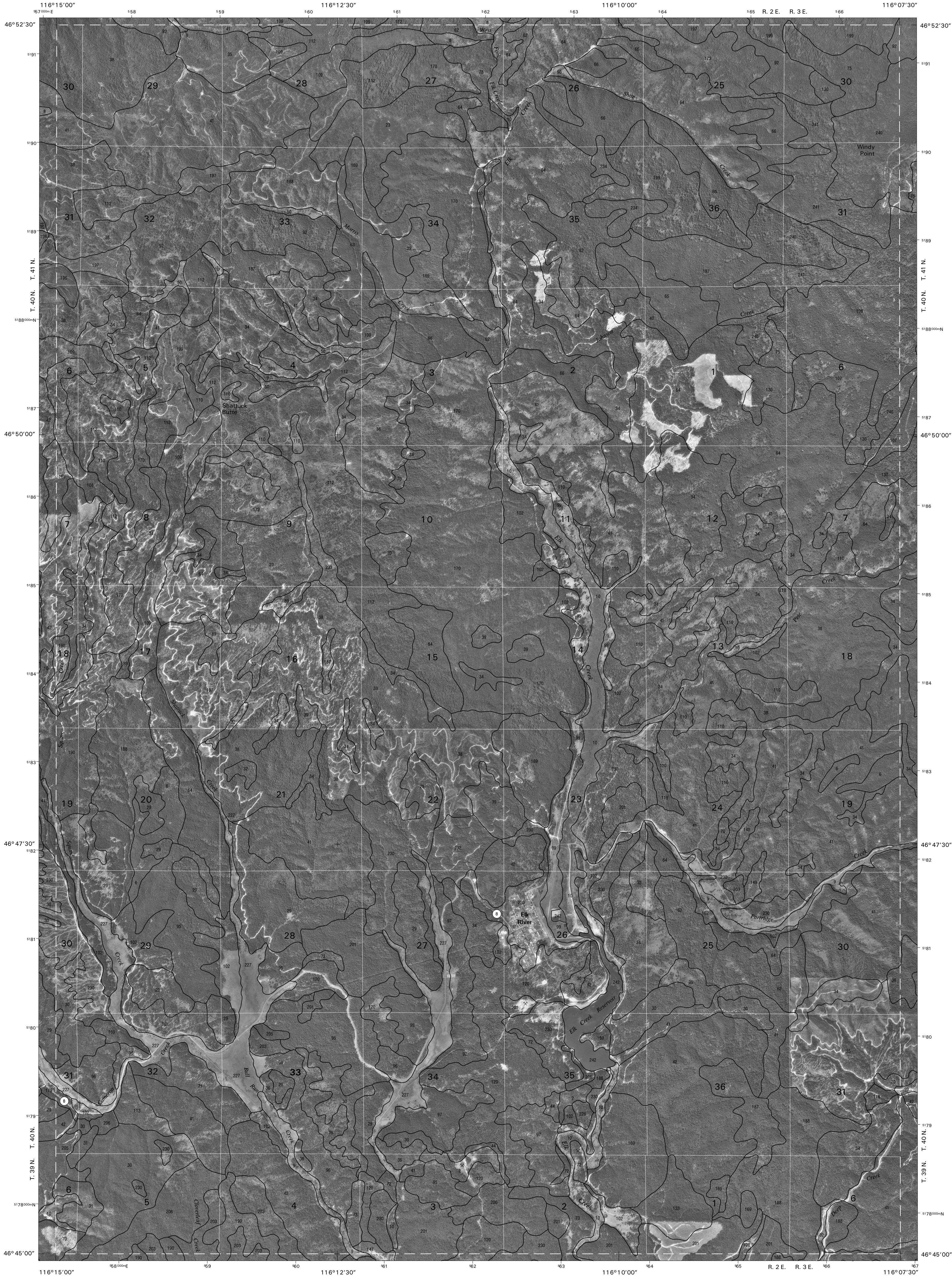
1	2
7	14
12	13

INDEX TO ADJOINING 7.5 MAPS

MCGARY BUTTE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 6 OF 36

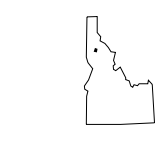
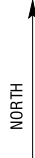
Soil map delineations extending beyond the dashed white quadrangle neoline are for reference only and are included on adjacent map sheets.



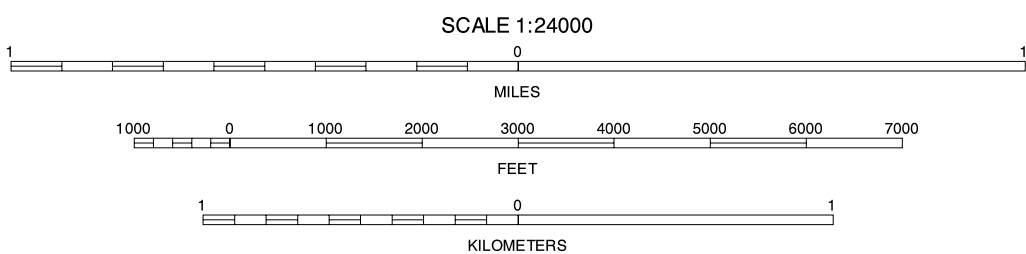


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992-1999 aerial photography. Cultural information was derived from the USGS. Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3
6	7	8
13	14	15

INDEX TO ADJOINING 7.5 MAPS

ELK RIVER, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 7 OF 36

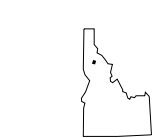
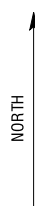
Soil map delineations extending beyond the dashed white quadrangle nealline are for reference only and are included on adjacent map sheets.



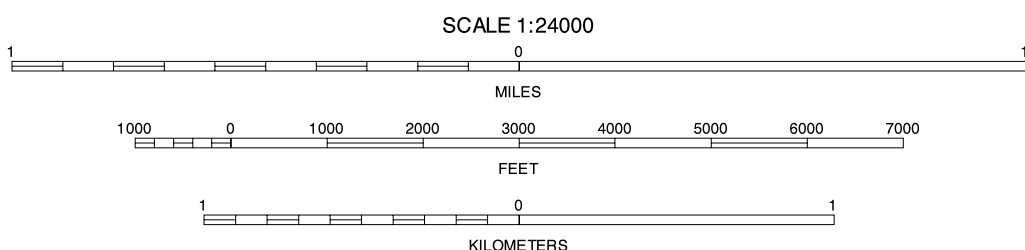


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992 - 1999 aerial photography. Cultural information was derived from the USGS' Public land survey system (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83), GRS-80 Spheroid  
1000-meter ticks: Universal Transverse Mercator, zone 11.  
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



2	3	4	2 ANTHONY PEAK
7	8	9	3 GRICE RIDGE
14	15	16	4 PINCHOT BUTTE
			7 ELK RIVER
			9 TOWNSHIP BUTTE
			14 ELK CREEK FALLS
			15 LITTLE GREEN MOUNTAIN
			16 JOHN LEWIS MOUNTAIN

INDEX TO ADJOINING 7.5 MAPS

ELK BUTTE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 8 OF 36

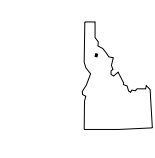
Soil map delineations extending beyond the dashed white quadrangle nealline are for reference only and are included on adjacent map sheets.



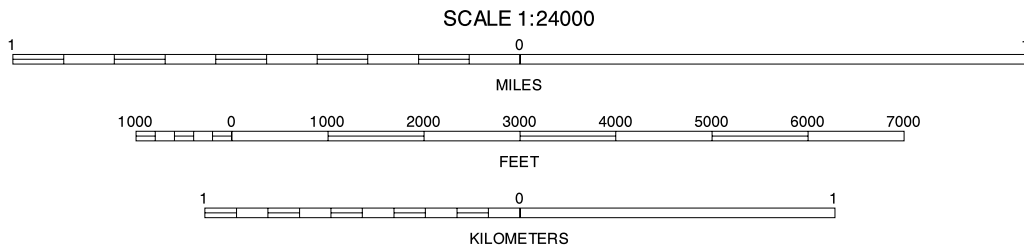


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992 - 1999 aerial photography. Cultural information was derived from the USGS' Public Land Survey System (PLSS) was acquired from the U.S. Department of the Interior, Bureau of Land Management. Boundaries and PLSS were edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 11. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



3	4	5	3 GRICE RIDGE
8		10	4 PINCHOT BUTTE
15	16	17	5 LITTLE GOAT MOUNTAINS
			8 ELK BUTTE
			10 BERTHA HILL
			15 LITTLE GREEN MOUNTAIN
			16 JOHN LEWIS MOUNTAIN
			17 HEADQUARTERS

INDEX TO ADJOINING 7.5 MAPS

TOWNSHIP BUTTE, IDAHO  
7.5 MINUTE SERIES  
SHEET NUMBER 9 OF 36

Soil map delineations extending beyond the dashed white quadrangle nealtine are for reference only and are included on adjacent map sheets.



CONVENTIONAL AND SPECIAL

SYMBOLS LEGEND

NAME			
er-Dowper-Grangemont complex, 15 to 40 percent slopes			
man ashy loam, 35 to 65 percent slopes			
man, dry-Pooman complex, 15 to 35 percent slopes			
man-Grandad complex, 15 to 35 percent slopes			
man-Grandad complex, 35 to 75 percent slopes			
man-Grandad, dry complex, 35 to 65 percent slopes			
near-Kauder complex, 5 to 20 percent slopes			
near-Sedow complex, 5 to 15 percent slopes			
g ashy silt loam, 35 to 60 percent slopes			
g ashy silt loam, 15 to 35 percent slopes			
g ashy silt loam, cold, 15 to 35 percent slopes			
g, cool-Rettig, dry complex, 35 to 65 percent slopes			
g-Grandad complex, 35 to 70 percent slopes			
g-Township complex, 35 to 60 percent slopes			
g-Township-Stepoff complex, 35 to 70 percent slopes			
old-Cranberry complex, 5 to 20 percent slopes			
old-Grangemont complex, 15 to 35 percent slopes			
outcrop-Whiskeycreek-Texascreek complex, 40 to 70 percent slopes			
er ashy silt loam, 15 to 35 percent slopes			
er-Grandad complex, 35 to 60 percent slopes			
er-Grangemont complex, 15 to 45 percent slopes			
nd-Scaler complex, 15 to 35 percent slopes			
low ashy silt loam, 15 to 25 percent slopes			
low ashy silt loam, 25 to 50 percent slopes			
low ashy silt loam, 5 to 15 percent slopes			
ns silt loam, 3 to 8 percent slopes			
ns silt loam, 15 to 35 percent slopes			
uck ashy silt loam, 35 to 65 percent slopes			
uck ashy silt loam, moist, 35 to 65 percent slopes			
uck-Dwornhak complex, moist, 15 to 40 percent slopes			
uck-Dwornhak complex, 15 to 35 percent slopes			
Wilkins complex, 3 to 15 percent slopes			
hwick silt loam, 3 to 12 percent slopes			
hwick-Larkin complex, 12 to 25 percent slopes			
meadow-Reggear complex, 5 to 15 percent slopes			
yre silt loam, 10 to 35 percent slopes			
y ashy silt loam, 3 to 10 percent slopes			
y-Joel complex, 10 to 20 percent slopes			
y-McCrosket complex, 15 to 35 percent slopes			
y-Setters complex, 3 to 8 percent slopes			
y-Setters complex, 8 to 20 percent slopes			
ean ashy silt loam, 35 to 50 percent slopes			
b ashy silt loam, 0 to 2 percent slopes			
iscreek-Rock outcrop complex, 45 to 75 percent slopes			
iscreek-Whiskeycreek complex, 35 to 75 percent slopes			
ridge-Threbear complex, 5 to 25 percent slopes			
odo-Lado complex, 15 to 35 percent slopes			
odo ashy silt loam, dry, 20 to 40 percent slopes			
iship-Rettig complex, 15 to 35 percent slopes			
iship-Rettig complex, 35 to 75 percent slopes			
iship-Rettig-Nakarna complex, 35 to 65 percent slopes			
percreek-Narrett complex, 5 to 15 percent slopes			
ashy loam, 35 to 75 percent slopes			
ashy silt loam, 35 to 75 percent slopes			
wood, high precipitation-Vaywood, dry complex, 15 to 35 percent slopes			
wood medial silt loam, 35 to 75 percent slopes			
wood-Handoff complex, 15 to 35 percent slopes			
ns silt loam, 0 to 5 percent slopes			
sbench silt loam, 2 to 10 percent slopes			
sbench-Lacy complex, 25 to 55 percent slopes			
BOUNDARIES			
National, state, or province	----		
County or parish	-----		
Minor civil division	-----		
Reservation (national forest or park, state forest or park)	-----		
Land grant	-----		
Limit of soil survey (label) and/or denied access area	-----		
Field sheet matchline and neatline	-----		
Previously Published Survey	-----		
OTHER BOUNDARY (label)	-----		
Airport, airfield	-----		
Cemetery	-----		
City/county park	-----		
STATE COORDINATE TICK	-----		
1 890 000 FEET	-----		
LAND DIVISION CORNER (section and land grants)	-----		
GEOGRAPHIC COORDINATE TICK	-----		
TRANSPORTATION			
Divided roads	=====		
Other roads	=====		
Trail	-----		
ROAD EMBLEM AND DESIGNATIONS			
Interstate			
Federal			
State			
County, farm or ranch			
RAILROAD			
POWER TRANSMISSION LINE			
PIPE LINE			
FENCE			
LEVEES			
Without road			
With road			
With railroad			
Single side slope (showing actual feature location)			
DAMS			
Medium or Small			
LANDFORM FEATURES			
Prominent hill or peak			
Soil Sample Site			
MISCELLANEOUS CULTURAL FEATURES			
Farmstead, house			
Church			
School			
Other Religion			
Located object			
Tank			
Lookout Tower			
Oil and/or Natural Gas Wells			
Windmill			
Lighthouse			
STREAMS			
Perennial stream, double line			
Perennial stream, single line			
Intermittent stream			
Drainage end			
DRAINAGE AND IRRIGATION			
Double-line canal (label)			
Perennial drainage and/or irrigation ditch			
Intermittent drainage and/or irrigation ditch			
SMALL LAKES, PONDS AND RESERVOIRS			
Perennial water			
Miscellaneous water			
Flood pool line			
MISCELLANEOUS WATER FEATURES			
Spring			
Well, artesian			
Well, irrigation			
SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO			
SOIL DELINEATIONS AND SYMBOLS			
LANDFORM FEATURES			
Bedrock escarpment			
Other than bedrock escarpment			
Short steep slope			
Gully			
Depression, closed			
Sinkhole			
EXCAVATIONS			
Borrow pits			
Gravel pit			
Mine or quarry			
Landfill			
MISCELLANEOUS SURFACE FEATURES			
Blowout			
Clay spot			
Gravelly spot			
Lava flow			
Marsh or swamp			
Rock outcrop (includes sandstone and shale)			
Saline spot			
Sandy spot			
Severely eroded spot			
Slide or slip			
Sodic spot			
Spot area			
Stony spot			
Very stony spot			
Wet spot			